TRASK (J. D.)

PRIZE ESSAY.

STATISTICS

OF

PLACENTA PRÆVIA.

"Homines nullâ re proprius ad Deos accedunt, quam hominibus salutem dando."

BY

JAMES D. TRASK, M.D.,

WHITE PLAINS, NEW YORK.

EXTRACTED FROM THE

TRANSACTIONS OF THE AMERICAN MEDICAL ASSOCIATION.

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T. K. AND P. G. COLLINS, PRINTERS.

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STATISTICS OF PLACENTA PRÆVIA.

The attachment of the placenta to the mouth of the womb, is justly regarded one of the most dangerous conditions to which the pregnant female is liable. Under no circumstances are the judgment and skill of the practitioner put to a more severe test, than in the conduct of labors in which this complication exists; and in none does he more require the aid of settled principles of practice for his guide.

The earlier writers seem to have supposed the placenta in such cases to be originally adherent to the fundus uteri, and that, during gestation or labor, it becomes detached and falls down upon the mouth of the womb. The adhesion of the placenta to the inner surface of the os uteri was subsequently noted by different observers; but to Dr. Rigby is universally awarded the credit of having drawn the distinction between accidental and unavoidable hemorrhage; and of showing that, in every case of attachment of the placenta to the mouth of the uterus, hemorrhage must take place during its dilatation. Hence he maintained that delivery by turning, as soon as the condition of the os uteri will permit, affords the patient the best chance for recovery.

Over two hundred years since, Guillemeau, who had learned the art of turning from his master, Ambrose Paré, practised it indiscriminately in all cases of severe hemorrhage before delivery; and from his time it had been generally resorted to; but previous to the appearance of Dr. Rigby's essay, there had been no distinction made between cases in which it was required, and others in which less severe expedients might prove sufficient.

Rupture of the membranes, by permitting the escape of the liquor amnii, and allowing the direct pressure of the presenting part against the placenta, is, for the most part, sufficient to restrain hemorrhage in partial presentations, but usually proves insufficient when the presentation is complete. In cases to which this expedient is not applicable, or in which it fails, turning may generally be resorted to; but experience has shown, that there are instances in which even this resource is not available. Cases occur in which it cannot be performed sufficiently early to save life, in consequence of extreme rigidity of the os uteri; and in others, in which the rigidity has been overcome by forcible introduction of the hand, the result has not unfrequently been disastrous.

In 1845, Professor Simpson, of Edinburgh, published an elaborate paper* in support of a recommendation which he had previously made, to detach the placenta artificially, in cases in which it is impossible or inexpedient to deliver by turning. The idea was suggested to him by the fact that, in most cases in which the placenta had been expelled spontaneously, or removed by the attendant, prior to the birth of the child, the flow of blood had at once ceased. Dr. Simpson's paper contained a statistical statement of the mortality of placenta prævia under all circumstances of its occurrence; which was estimated at *one* in *three*. A table of cases in which the placenta had been spontaneously expelled, and intentionally or accidentally detached, exhibited a mortality, under these circumstances, of *one* in *fourteen*.

The comparison thus instituted between results after ordinary modes of delivery, and those following separation of the placenta, apparently so much in favor of the proposed plan of treatment, could not fail to excite deep interest; though a proposition so directly at variance with the generally received belief, that the patient's safety depends upon the integrity of the vascular connection of the placenta with the womb, was bold and startling.

The great success which it promised, led to the early trial of the "new practice," and, in not a few instances, it was resorted to when delivery by the ordinary means would have been equally efficacious and safe; as when the os was dilatable, and the patient in a favorable condition for turning or even for delivery by the unaided efforts of nature. In some instances, turning has immediately followed the entire detachment of the placenta, thus exposing the

* London and Edinburgh Monthly, March, 1845.

child, as may be supposed, to unnecessary risk. It is believed, also, that, in our own country, its limitation to certain exceptional cases, to which it was originally recommended as applicable, has been disregarded; and the "new practice" is spoken of by many of high general intelligence, as one that may be employed indiscriminately with the "old practice," or resorted to in any case as a matter of experiment.

In the London *Lancet*, 1847, vol. i. p. 480, Dr. Simpson thus enumerates the conditions to which this operation is applicable; "severe cases of unavoidable hemorrhage, complicated with an os uteri so insufficiently dilated and undilatable as not to allow of version being performed with perfect safety to the mother; therefore, in most primiparæ; in many cases in which placenta presentations are connected with premature labor and imperfect development of the cervix and os uteri; in labors supervening earlier than the ninth month; when the uterus is too contracted to admit of turning; when the pelvis or passages of the mother are organically contracted; when the child is dead; when it is premature and not viable; and when the mother is in such an extreme state of exhaustion as to be unable without immediate peril to life, to be submitted to the shock and dangers of turning, or forcible delivery of the infant."

In examining the merits of this suggestion, it would appear that the first question to be solved is, will *artificial* separation of the placenta from its attachments around the mouth of the womb put a stop to the hemorrhage? If it will accomplish this, it evidently must be a resource of great value in some cases, whether it be generally applicable or not. We should then inquire whether, though the hemorrhage be checked, there be any attendant circumstances, as great suffering during the operation or great temporary augmentation of the bleeding, that would tend to impair or destroy its value as a means of relief to the patient. Furthermore, if it confer safety upon the mother, is there increased risk to the child; such as to render the operation available only in exceptional cases?

It has been objected to Dr. Simpson's statistics, that they embrace incongruous and discordant materials. The table of general mortality of placenta prævia, consists of cases occurring at every age, in every condition in life, subjected to every variety of treatment, and some in which there had been no medical attendance; cases complicated with rupture of the uterus, puerperal convulsions, by contracted pelvis, and by the existence of epidemic erysipelas, &c.

The second table embraces under one head, cases of spontaneous expulsion of the placenta prior to the birth of the child; cases of its removal by ignorant attendants, and cases in which it was detached with the design of suppressing hemorrhage; which different conditions *may* materially modify the result.

The first table gives us the general mortality of the accident under all its varied conditions and complications; but when a comparison of results is intended, between different modes of practice, it is plain that it should be between groups of cases closely resembling each other in all prominent characters, and differing as little as possible, excepting in the treatment to which they are subjected. It is true that, with the materials of which statistical tables in medicine are necessarily composed, it is impossible to carry this selection of cases to the full extent; but recommendations based upon such, cannot be considered entitled to much importance in influencing practice, unless, by a careful analysis of cases, means are furnished for forming an opinion of their value, independent of *gross numerical results.* Cases that were not subjects of medical treatment should be considered in a class by themselves.

In the table given by Dr. Lee, in the London *Lancet*, vol. ii. 1847, p. 300, in 62 cases there were 15 deaths, or 1 in $4\frac{2}{15}$. Of these, one patient was seen by no medical attendant, before death; another was dying when seen, but turning was performed; three others died during an epidemic of phlebitis and metritis; in another there was extensive laceration of the cervix. The degree of hemorrhage, previous to delivery, differs so greatly as, of itself, to make a vast difference in the result. Such circumstances ought surely to be taken into consideration, in any comparison of the merits of different modes of treatment.

These remarks are made to show that tables constructed after the plan of Dr. Simpson's, can furnish only gross results, which cannot secure our confidence as a basis for deciding upon the relative value of different modes of treatment. It is true that the great question is: Will this expedient stay the loss of blood? If this can be shown, a diminution of mortality would seem necessarily to follow its adoption; yet the benefit thus obtained may be balanced by evils not at first apparent—hence our need of statistics.

Dr. Simpson maintained that the hemorrhage takes place chiefly hrough the medium of the placenta, and not from the exposed open veins of the uterine surface; that "in common cases of unavoidable hemorrhage, the amount of hemorrhage seems to be regu-

lated as much by the quantity of placental surface still attached, as by the quantity already separated from it, and as the separation progresses, hemorrhage diminishes, till at last we find that when the one organ is completely separated from the other, the flooding is instantly moderated, or entirely arrested."

Dr. Robert Lee opposed the new suggestion with great vehemence, chiefly upon physiological grounds, and in consequence of certain inaccuracies in Dr. Simpson's tables, which do not, however, materially affect the general results.

We have collected all the published cases of placenta prævia, which we could find in the leading medical journals, and in the pages of standard authors; to some of the authorities, whose experience is quoted by Dr. Simpson, and to others not embraced in his table, we have not had access. Several cases have been kindly communicated to us by physicians in whose practice they occurred. To these gentlemen, and to others, who have kindly assisted us in the collection of materials for this paper, we present our sincere thanks.

We have arranged the cases under three heads. Table I. consists of cases subjected to the various ordinary modes of treatment, embracing recoveries and deaths, and a few cases that died undelivered. Table II. embraces cases of spontaneous expulsion of the placenta, prior to the birth of the child. Table III. includes cases in which the placenta was artificially detached before the birth of the child. A few cases we have been obliged to quote at second hand.

We have sought, in our analysis of cases, to select from their histories every statement of fact bearing upon the condition of the patient, or upon the influence of medical treatment. These facts have been arranged under particular heads; and in the summary which follows will be found an answer to many interesting and important questions relating to the influence of certain conditions and circumstances upon the well-being of both mother and child. This summary embraces nearly all the subjects noted in the tables: the previous health and prevalence of epidemics are excepted, from the small number of cases in which these are spoken of.

Summary of Ages in all the Cases.

18 years	1 case.	34 years	5 cases.
20 "	2 cases.	35 "	7 "
21 "	3 "	36 "	2 "
22 "	1 case.	37 "	1 case.
23 "	4 cases.	38 "	8 cases.
24 "	3 "	39 "	6 "
25 "	6 "	40 "	15 "
26 "	5 "	41 "	5 "
27 "	7 "	42 "	4 "
28 "	6 "	43 "	2 "
29 "	5 "	44 "	2 "
30 "	7 "	45 "	1 case.
31 "	5 "	48 "	1 "
32 "	4 "	50 "	1 "
33 "	3 "		

Number of the Pregnancy.

Of the 1st pregnancy,	14 cases.	Of the 9th pregnancy,	12 cases.
" 2d "	32 "	" 10th "	4 "
" 3d "	17 "	" 11th "	5 "
" 4th "	18 "	" 12th "	2 "
" 5th "	16 "	" 14th "	2 "
" 6th "	13 "	" 16th "	4 "
" 7th "	8 "	" 20th "	1 case.
" 8th "	6 "	multiparæ	17 cases.

Degree of Presentation of Placenta in all the Cases.

There were 169 cases of *complete* presentation.
" " 88 " " *partial* " "

In the remaining cases, the degree to which the placenta covered the cervix is not stated.*

Of the *recoveries*, under all modes of treatment—
119 were complete presentations.
71 " partial " " or 37 per cent. partial.

* In the *London Medical Gazette*, 1845, will be found a table of thirty-four cases of placental presentation, reported by Dr. Lever, occurring in the Guy's Hospital Lying-in Charity. The facts in this table have been incorporated with the summaries of our own cases given below.

Of the *deaths*—

51 were complete presentations.

15 " partial " " or 23 per cent. partial,

showing the preponderance of complete presentations of the placenta among fatal cases.

Period of Pregnancy at which the Case terminated.

Of *recoveries*, there were at the				3d	month	. . .	1	case.
"	"	"	"	5th	"	. . .	2	cases.
"	"	"	"	6th	"	. . .	7	"
"	"	"	"	7th	"	. . .	18	"
"	"	"	"	$7\frac{1}{2}$	"	. . .	8	"
"	"	"	"	8th	"	. . .	47	"
"	"	"	"	$8\frac{1}{2}$	"	. . .	10	"
"	"	"	end of	8th	"	. . .	6	"
"	"	"	at the	9th	"	. . .	25	"
"	"	"	at full time			. . .	37	"
					Total		161	"
Of *deaths*, there were at the				4th	month	. . .	1	case.
"	"	"	"	7th	"	. . .	10	cases.
"	"	"	"	$7\frac{1}{2}$	"	. . .	4	"
"	"	"	"	8th	"	. . .	12	"
"	"	"	"	$8\frac{1}{2}$	"	. . .	9	"
"	"	"	end of	8th	"	. . .	2	"
"	"	"	"	9th	"	. . .	7	"
"	"	"	full time			. . . . .	9	"
					Total		54	"

We may remark, in passing, that this gives a mortality of about one in four, of cases in which the period of pregnancy happens to be noted, which does not differ much from Dr. Simpson's estimate (1 in $3\frac{6}{10}$) of the general mortality of the accident. The tendency to premature delivery in cases of placental presentation, is alluded to by many obstetric writers, and there is a decided preponderance of such among the above cases.

Is there a larger proportion of fatal cases among patients delivered prematurely than among those who accomplish the full period?

Omitting the cases at the third and fourth months as being mis-

carriages, of 137 cases occurring *before the ninth month*, 38, or 28 per cent., were *lost;* while of the 78, at *full time*, or the ninth month, 16, or 20 per cent., were *lost*. These results, so far as they go, indicate the propriety of endeavoring to carry every case to maturity, if it be possible, as a means of increased safety to the mother.

But while the results afforded by this table, as a whole, are doubtless correct, possibly, among the cases occurring in the earlier months, there is not a fair representation of the mortality at the respective periods; for example, seven recoveries at the sixth month, and no loss. But, "until the seventh month of pregnancy, the bloodvessels of the uterus have not attained a sufficient size to pour out blood in so great a quantity as suddenly to destroy life, though the discharge may be very profuse and produce alarming symptoms." (Lee's *Lectures*, p. 362.) "We may remark, as a general rule, and as a consolatory circumstance, that nature, if not interrupted, or when given the best chance, will almost always effect the expulsion of the ovum, previously to, or soon after, the sixth month, without the manual interference of the accoucheur." (Dr. Dewees, *Phil. Med. and Phys. Journ.*, vol. v. p. 292.)

Of the eleven cases in the table, *before* the *seventh month*, there was but one death, and that not from hemorrhage, but from tetanus, several days after delivery.

Again: from the seventh *to* the ninth month, not including the latter, because in some reports the ninth month is apparently used to denote the full time—there are eighty-nine recoveries and thirty-seven deaths, or *one in three and a half;* while at the full time, as we have seen, there were sixty-two recoveries, and only sixteen lost, or less than *one in five.*

From this it appears, that previous to the seventh month, the risk is least, and that the period of greatest danger is between the seventh month and the completion of the term of pregnancy.

When the case has proceeded to the end of the ninth month, though there may be great reduction of the strength from previous hemorrhages, the patient enjoys the immense advantage in almost every case of the natural contractions of the womb, to aid in the expulsion of its contents, and to secure its contraction after the child is delivered. It is true that, in the cases in which the child is expelled, and in many in which it is delivered by art, before the full time, expulsive pains are present to a greater or less degree; but, at the full period, they are more constant, as will appear by referring to the following cases, and comparing the two groups.

In Cases 5, 13, 38, 69, 70, 84, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 103, 105, 110, 111, 121, 148, 149, 162, 165, 227, 230, 236, 238, 241, 267, 276, 281, 284, 295, 300, 311, 315, 317, 321, 323, 327, 330, 332, total 43; labor was *premature*, and more or less pain is alluded to as present; but in very many of these it is evident that there were no active contractions.

In Cases 8, 20, 34, 37, 41, 101, 159, 174, 192, 269, 280, total 11, labor was *premature*, and it is distinctly stated that there were no pains. In many others in which no direct mention is made of the circumstance, it is quite apparent that there were none.

In Cases 2, 6, 9, 64, 65, 66, 71, 79, 85, 86, 90, 109, 124, 166, 183, 190, 193, 219, 222, 229, 241, 260, 283, 316, 329, total 25, labor was at *full time*, and pains were present.

In Cases 153, 157, 193 at *full time*, it is stated that there were no pains, and in Cases 167, 172, there were little or none.

This question has an important practical bearing; for if it be desirable to carry the case to maturity, we must avoid any expedient for the arrest of the hemorrhage, as the tampon, which is calculated to induce uterine contractions.

Presentation of the Child.

Head, including complications with descent of funis and of hand . . .	113 cases.	Funis and leg . .	1 case.
		Umbilicus . . .	2 cases.
Shoulder	4 "	Breech	8 "
Arm	14 "	Foot	13 "
Arm and head, funis and leg, the foot of one, and head of the other.	3 "	Twins	1 "

Of the remainder, the presentation is not stated; probably the most, if not all, were of the head, as is in many instances rendered probable by the context. The frequency of unnatural presentations of the child in placenta prævia has been often remarked, and is probably due to the large proportion of premature births.

TABLE I.—*Recoveries*

NO.	BY WHOM AND WHERE REPORTED.	AGE.	NO. OF PREGNANCY AND GENERAL HEALTH.	PERIOD OF PREGNANCY.	PARTIAL OR COMPLETE.	STATE OF OS UTERI.	PRESENTATION.	GENERAL CONDITION AT TIME OF DELIVERY.
1	Dr. Dewees, in Phil. Med. and Phys. Journal, v. 286.				Complete	Rigid and high up; plugged; in 6 hours dilated sufficiently to allow of turning.		When found, was pale, feeble, and extremely alarmed; had no pains; pains came on 4 hours after plugging.
2	Dr. Collins, p. 54, Case No. 4.	23	7th child	Full time	A portion was found at the os	Admitted of delivery.	Head	"Looked pale and weakly."
3	Ibid., Case 77.	32	9th pregnancy	Full time	A large portion found at the os	Os little dilated but relaxed and thin.	Head	Little or no uterine action.
4	Ibid., Case 72.	28	5th pregnancy	Full time	Partial		Head	
5	Ibid., Case 17.	33	2d child	8th month	Partial	Os size of a crown piece; very relaxed; well dilated at delivery.	Head	
6	Ibid., Case 50.	30	6th child	Full time	Partial	Size of a crown and rigid.	Head	Much reduced.
7	Ibid., Case 119.	34	7th child	Full time	Partial		Head	
8	Ibid., Case 33.	38	5th pregnancy	7th month	Partial		Foot	
9	Ibid., Case 83.	28	2d pregnancy	Full time	Partial		Breech	
10	Dr. Clark, Dub. Hosp. (See Dr. Collins, p. 54, note.)			6th month				
11	Ibid.			8th mo.				
12	Ibid.			Had a defective pelvis				
13	Dr. Robert Lee's Lectures, No. 3, Clinical Med., p. 262.			7½ months	Found hanging out of the os			Apprehended she would die undelivered.
14	Ibid., No. 5, Clin. Med., p. 264.				Complete	Soft and dilated.		Exhaustion.
15	Ibid., No. 6, Clin. Med., p. 265.			8th month	Placenta attached to lower part of the uterus	Os widely dilated, and placenta in part hanging through it.		Usual effects of loss of blood.
16	Ibid., No. 8, Clin. Med., p. 267.			7th month	Complete	Os very rigid; little dilated.		Great exhaustion; pulse imperceptible; extremities cold.

after Turning, &c.

AMOUNT AND DURATION OF HEMORRHAGE BEFORE DELIVERY.	MODE OF DELIVERY.	DISPOSITION OF PLACENTA.	RECOVERY.	FATE OF CHILD.	REMARKS.
Sudden profuse discharge of blood on the doctor's arrival; though near at hand, more than half a gallon was lost; plug; no hemorrhage for 6 hours; then delivered.	Turning.		Recovered	Living	
Some weeks before, had free hemorrhage, and a considerable flow 3 days before admission; had a pain and an immense dash of blood.	Turned with little difficulty; no more loss of blood; rallied slowly.		Discharged in 17 days	Dead	
A copious discharge of blood; little or no pain.	Version without difficulty.	Permitted to remain an hour in the vagina, and then expelled.	Left well on the 16th day	Living	Half an hour after expulsion of placenta, profuse bleeding came on for an hour and a half, which much reduced her.
Several attacks of hemorrhage previously, but not to an alarming extent; returning occasionally.	No interference required.		Recovered	Living	
Several profuse attacks before admission; returned at intervals, and increased by pains for 2½ hours.	Forceps; 2½ hours after admission; without much difficulty.		Left well on the 15th day	Living	
Frequent discharges of blood for 8 days; discharge increased by pains; 10 hours after admission, pains came on and hemorrhage set in.	Attempt to pass the hand, on return of hemorrhage, which failed; head opened; operation difficult.		Recovered	Dead	Presenting part of the placenta hard, whitish, with little vascularity.
Had suffered much from hemorrhage before admission	Child being dead, head opened.		Recovered	Dead	
Ten days before, had considerable discharge of blood; trifling return before admission; no pain.	Foot brought down without further loss of blood.	Found almost entirely separated, and in the vagina, before delivery.	Recovered	Putrid	One-half of placenta much altered, containing large and whitish masses like fat, and lymph highly organized.
Had been in labor several hours, and suffered severe hemorrhage; hemorrhage frequent, but not such as to excite uneasiness.	Breech at once brought down, by a finger hooked into the groin, and child soon expelled.		Recovered	Living	
	Had a forced delivery.		Recovered		
	Had a forced delivery. Craniotomy.		Recovered Recovered	 Dead	
Hemorrhage 36 hours before aid was called; a violent flooding for several hours.	Turning proposed, but refused; fœtus and placenta expelled together.		Recovered		Great exhaustion.
Great hemorrhage.	Hand passed by the placenta; membranes ruptured; child turned.		Recovered	Dead	
Large quantity lost.	Turning easy.		Recovered	Dead	
Slight oozing for 3 weeks, then profuse discharge.	Repeated attempts to turn; at last, effected with difficulty, and hemorrhage arrested.		Recovered		Exhaustion; rigors; death threatened.

TABLE I.—*Recoveries after*

NO.	BY WHOM AND WHERE REPORTED.	AGE.	NO. OF PREGNANCY AND GENERAL HEALTH.	PERIOD OF PREGNANCY.	PARTIAL OR COMPLETE.	STATE OF OS UTERI.	PRESENTATION.	GENERAL CONDITION AT TIME OF DELIVERY.
17	Dr. Robert Lee's Lectures, Case No. 9, Clinical Med., p. 268.			8th month	Found hanging out of the os	Rigidity of os, and distortion of pelvis, forbid turning.	Head	
19	Ibid., No. 11, Clin. Med., p. 270.			9th month	Partial	Rigid; size of a crown.	Head	Syncope.
20	Ibid., No. 17, Clin. Med., p. 273.			8th month	Hanging out of the os	Soft and dilatable.		Pulse rapid and feeble; no pains.
21	Ibid., No. 18, Clin. Med., p. 278.			6th month	A portion of the detached placenta hanging from the os	Soft and widely dilated.		Large loss.
22	Ibid., No. 19, Clin. Med., p. 279.			9th month	Complete	Os slightly dilatable.		Extreme debility.
23	Ibid., No. 20, Clin. Med., p. 280.			9th month	Partial	Os slightly dilated at first; in 24 hours, fully dilated.	Head	No constitutional symptoms.
24	Ibid., No. 21, Clin. Med., p. 275.				Complete	End of third day, largely dilated.		No labor pains.
25	Ibid., No. 25, Clin. Med., p. 284.	40		7th month	Adhered to neck; complete	Rigid.		Syncope.
26	Ibid., No. 27, Clin. Med., p. 286.			7th month	Partial			For days previous, experienced sense of weight and uneasiness.
27	Ibid., No. 28, Clin. Med., p. 287.			8th month	Complete	Thick and little dilated; hand could not be passed in.		Syncope.
28	Ibid., No. 30, Clin. Med., p. 291.			8th month	Complete	Os rigid; size of a half-crown.		
30	Ibid., No. 32, Clin. Med., p. 293.			8th month	Complete; adhering to the os	Thick and dilatable; finger with difficulty introduced. [With ease; see Clin. Med.]		Faint; great loss.
31	Ibid., No. 33, Clin. Med., p. 294.			End of 7th month	Complete	Size of a half-crown; not rigid.	Breech	Strength little impaired; great hemorrhage.
32	Ibid., No. 34, Clin. Med., p. 288.			6th month	Partial			
33	Ibid., No. 36, Clin. Med., p. 296.			8th month	Complete	Partially dilated; rigid.		
34	Dr. Lee's Case 37, in London Lancet, ii. 482, 1845.			8th month	Complete	Not much dilated; soft and yielding.		
35	Ibid., Case 38.			7th month	Complete	Os was of size of a crown piece.		
36	Ibid., Case 39.			8th month	Partial			

Turning, &c.—Continued.

AMOUNT AND DURATION OF HEMORRHAGE BEFORE DELIVERY.	MODE OF DELIVERY.	DISPOSITION OF PLACENTA.	RECOVERY.	FATE OF CHILD.	REMARKS.
Profuse hemorrhage; hemorrhage continued.	Craniotomy; delivered after 4 hours with great difficulty.		Recovered	Dead	
Slight flow during 14 days, ending with immense discharge.	Membranes ruptured; spontaneous expulsion.		Recovered	Dead	Hemorrhage arrested by rupture of the membranes.
After a fit of coughing, severe hemorrhage.	Turning easy.	Allowed to remain some time to act as a plug.	Recovered	Living	
Occurring at intervals during 4 weeks; ergot given; flooding increased by it.	Turning easy.		Recovered	Living	
Hemorrhage at intervals for several days.	Membranes ruptured, and a foot brought down; delivery easy.		Recovered after severe phlebitis		No hemorrhage followed delivery.
Hemorrhage slight.	Membranes ruptured, and delivery spontaneous.		Recovered	Living	
Hemorrhage lasting for 3 days; great discharge of blood at last took place.	Turning easy.		Recovered	Dead	
Hemorrhage profuse.	Two fingers introduced into os, and foot easily brought down before the membranes were ruptured; turning easy.		Recovered	Dead	Hemorrhage arrested by delivery.
Profuse hemorrhage.	Membranes ruptured, inducing strong labor pains; child expelled in 1¼ hours.		Recovered	Dead	Hemorrhage arrested by rupture of membranes.
Hemorrhage during 7th month; repeated twice, at short intervals, in 8th month; immense discharge at last, inducing syncope.	Fore and middle finger passed between placenta and uterus; a foot brought down with great difficulty; head delivered by great exertion.		Recovered		
Spontaneous in 8th mo.; several attacks; not very profuse.	Turned without difficulty; hemorrhage arrested.		Recovered		
Profuse flooding.	Turning easy.		Recovered	Living	
	Foot brought down without difficulty.		Recovered	Dead	Nates firmly grasped by cervix.
	Membranes ruptured, and a dead child expelled.		Recovered	Dead	Hemorrhage arrested by delivery.
Hemorrhage in 7th mo.; ceased; renewed in 6 weeks with syncope.	Turning; hemorrhage ceased; delivery easy; great faintness.	Placenta could not be separated; hence, fingers forced through it.	Recovered		
Discharged at intervals for two or three weeks.	Hand passed without difficulty; turning and delivery.	Placenta soon followed.	Recovered quickly	Dead	Hemorrhage ceased after expulsion of child and placenta.
Suffering from profuse hemorrhage for 3 weeks.	Attempted to pass the hand, but failed; with 2 fingers passed under the placenta, ruptured the membranes, seized a foot, and delivered.	Expelled soon after.	Recovered	Living	Hemorrhage entirely ceased after expulsion of child and placenta.
"With profuse hemorrhage."	Membranes were ruptured; ergot given; natural birth.	Expelled.	Recovered		

TABLE I.—*Recoveries after*

NO.	BY WHOM AND WHERE REPORTED.	AGE.	NO. OF PREGNANCY AND GENERAL HEALTH.	PERIOD OF PREGNANCY.	PARTIAL OR COMPLETE.	STATE OF OS UTERI.	PRESENTATION.	GENERAL CONDITION AT TIME OF DELIVERY.
37	Dr. Lee's Case 40, in London Lancet, ii. 482, 1845.			8th month	Partial	Rigid; undilated.		Danger very imminent.
38	Ibid., Case 41.			8th month	Partial	Size of a crown piece; rigid and thick.		Pains were diminishing, and hemorrhage increasing, to an alarming extent.
39	Ibid., Case 42.	41		8th month	Partial	Partially dilated, and not dilatable.		Immediate delivery indicated.
40	Ibid., Case 43.			8th month	Complete	Little dilated and very rigid; plugged after 7 hours; a half-crown piece; thick, and rigid.		Profuse hemorrhage, and great fainting.
41	Ibid., Case 44.		3d pregnancy; distorted pelvis	5th month	Uncertain			
42	Dr. Lee's Case 44, in Lancet, ii. 300, 1847, which should be Case 45. See, also, London Med. Gazette, 1845, p. 1019.		3d pregnancy	9th month	Complete	Little dilated; apparently relaxed.		Strength little impaired, until when seen; then almost pulseless; part of the time insensible; face indicated great loss of blood.
43	Ibid., Case 46; marked 45.			9th month	Complete	Os soft and yielding; size of a dollar.		
44	Ibid., Case 47; marked 46.				Partial			
45	Ibid., Case 48; marked 47.				Partial			
46	Ibid., Case 49; marked 48.				Partial			
47	Ibid., Case 50.				Complete			
48	Ibid., Case 51.				Complete			
49	Ibid., Case 52.				Complete			
50	Ibid., Case 53.				Complete			
51	Ibid., Case 55.				Complete			
52	Ibid., Case 56.				Complete			
53	Ibid., Case 57.				Complete			
54	Ibid., Case 58.				Complete			
55	Ibid., Case 59.				Partial			
56	Ibid., Case 60.				Complete			
57	Ibid., Case 61.				Complete			
58	Ibid., Case 62.			7th month	Complete	Partially dilated and rigid.		Discharge very profuse; danger imminent.
59	Ibid., Case 63; marked 62.			Far advanced	Partial	Os size of a crown piece.	Head	Hemorrhage profuse.
60	Rigby's Essay, Case 6.					Os partially dilated, and resistance of uterus trifling.	Head	Faintness extreme, and every symptom of most immediate danger.
61	Ibid., Case 13.				Complete	Os quite shut.	Head	Flooding came on with labor pains, which had ceased; appearance most threatening.

Turning, &c.—Continued.

AMOUNT AND DURATION OF HEMORRHAGE BEFORE DELIVERY.	MODE OF DELIVERY.	DISPOSITION OF PLACENTA.	RECOVERY.	FATE OF CHILD.	REMARKS.
Profuse flooding for 2 weeks; had lost a great amount.	Attempted turning; had failed; ruptured the membranes, but no pains; head perforated, and crotchet used.	Soon followed the child.	Recovered	Lost	Hemorrhage ceased entirely after expulsion of child and placenta.
Hemorrhage for 3 weeks.	Turning was impracticable, and funis did not pulsate; perforated with much difficulty.	"Followed the child."	Recovery rapid and complete	Lost	Hemorrhage ceased entirely after expulsion of child and placenta.
Moderate discharge for several days; an immense gush suddenly occurred.	Membranes ruptured, but bleeding continued; head was opened and extracted with difficulty.	"Soon expelled."	Recovered	Lost	Hemorrhage ceased entirely after expulsion of child and placenta.
Hemorrhage, but not alarming, for 3 weeks, and then suddenly very profuse; plugged; profuse in 7 hours.	Attempted turning; failed; foot grasped by fore and middle fingers, and delivered.	"Soon followed."	Recovered in 6 hours	Lost	Hemorrhage ceased entirely after expulsion of child and placenta.
Profuse hemorrhage on the day after the operation, but no signs of labor.	Premature delivery for narrow pelvis; placenta was pierced by stilette; in 3 days, spontaneous expulsion.		Recovered		
Attacked three weeks before, and lost much at different times; danger very imminent.	Could not easily dilate; head was pushed aside by 2 fingers, on rupture of membranes, and a foot seized; strong traction required to overcome rigidity of os.	After a little time, placenta removed.	Rallied from the dangerous exhaustion and recovered		
First attacked in 8th month, and repeated several times in a slight degree; great gush 5 days before delivery and on day of delivery.	Passed hand between womb and placenta; ruptured membranes, and turned.	Being wholly detached, was extracted, and hemorrhage ceased.	Rallied after some hours of most alarming exhaustion	Dead	Immense hemorrhage followed birth of child.
	Membranes ruptured; spontaneous expulsion.		Recovered		
	Membranes ruptured; spontaneous expulsion.		Recovered		
	Membranes ruptured; spontaneous expulsion.		Recovered		
	Turning.		Recovered		
	Turning.		Recovered		
	Turning with 2 fingers.		Recovered		
	Turning with 2 fingers.		Recovered		
	Turning with 2 fingers.		Recovered		
	Placenta and fœtus expelled spontaneously.		Recovered		
	Turning.		Recovered		
	Turning with 2 fingers.		Recovered		
	Ruptured membranes; spontaneous expulsion.		Recovered		
	Placenta and child expelled.		Recovered		
	Craniotomy.		Recovered		
Six weeks before, hemorrhage came on, and had profuse 4 times.	Perforated the placenta with 2 fingers; head pushed away, and leg seized by the fingers; extraction difficult.	"A good deal of time and force required to draw the hand through the os."	Recovered		Placenta detached and withdrawn; in half an hour hemorrhage ceased.
Suddenly seized.	Attempt to turn failed; craniotomy.		Recovered	Dead	
Had been flooding a considerable time, and lost a large amount of blood.	Delivered at once by turning, after separating the placenta on one side.		Recovered after a time	Dead	
Had been flooding very much for several hours; discharge still profuse.	Dilated the os, first by one finger, till hand passed; separated the placenta on one side, after failing to perforate it; turned and delivered with ease.		Eventually recovered	Not stated	Great exhaustion followed delivery.

TABLE I.—*Recoveries after*

NO.	BY WHOM AND WHERE REPORTED.	AGE.	NO. OF PREGNANCY AND GENERAL HEALTH.	PERIOD OF PREGNANCY.	PARTIAL OR COMPLETE.	STATE OF OS UTERI.	PRESENTATION.	GENERAL CONDITION AT TIME OF DELIVERY.
62	Rigby's Essay, Case 23.		Sickly woman	Last month	But a small portion		Head	
63	Ibid., Case 24.			Middle of 8th month	Complete	"Uterus not completely distended," but dilatable.	Head	Was faint, &c., but not reduced so much as to induce him to turn, had not the placenta presented.
64	Ibid., Case 26.		Very tender and delicate constitution; bad health; 8th labor	Full time	Complete	When first seen, was the size of a shilling, but not dilatable; became dilatable.	Head	Bleeding had become rapid and considerable.
65	Ibid., Case 31.			Full time	"At the os"		Presumed head	Hemorrhage had been of many hours' duration, "and much blood lost."
66	Ibid., Case 35.		Borne many children	Full time	Complete	Not much opened, but dilatable.	Presumed head	Extremely faint.
67	Ibid., Case 37.		Had many children and always full of complaints and had bad labors	Last month	Partial	At first, it did not admit of turning.	Breech	
68	Ibid., Case 39.		2d pregnancy	Near full time	Complete	Os at first very little opened, and rigid; 2 days after, it permitted turning; os dilatable.	Presumed head	
69	Ibid., Case 43.			30 weeks gone		At first, os rigid, and resisted the fingers.	Head	After attempt at delivery, pains and discharge continued; was more and more faint; in an hour and a half after arrival, a profuse hemorrhage, and most alarming syncope.
70	Ibid., Case 45.			20 weeks	Complete	Uterus too small to admit the hand.		Bleeding continued with every pain.
71	Ibid., Case 46.		3d child	Full time	Complete	Dilatable; admitted four fingers.	Presumed head	
72	Ibid., Case 48.			Last month	Complete	Soft and yielding.	Presumed head	
73	Ibid., Case 49.		Healthy	Full time	"Placenta presenting"	Admitting the hand.	Presumed head	Had not suffered an excessive loss.
74	Ibid., Case 50.				"Placenta presenting"	Soft and yielding.	Breech	Delivered before any great quantity of blood was lost.
75	Ibid., Case 54.		3d labor	Near full time	Apparently complete	Lax.	Apparently head	Lost a great quantity, and extremely faint.
76	Ibid., Case 56.				Apparently complete		Apparently head	
77	Ibid., Case 57.				Attached to os		Apparently head	

Turning, &c.—Continued.

AMOUNT AND DURATION OF HEMORRHAGE BEFORE DELIVERY.	MODE OF DELIVERY.	DISPOSITION OF PLACENTA.	RECOVERY.	FATE OF CHILD.	REMARKS.
Some hemorrhage on 21st, 25th, 26th; ruptured the membranes; bleeding almost ceased; on 27th, came on severe; in 2 hours pains came on; head descended; delivered in 5 hours.			Recovered though much reduced		Placenta, very thin and irregular, attached to one side of the uterus; bleeding seemed chiefly from a separated portion high up.
Had been flooding several hours, and for the last half hour it considerably increased.	Delivered by turning, without much difficulty.		Extremely languid for some time, but recovered	Dead	
Slight bleeding during 8 hours; carefully watched; increased suddenly as pains came on.	Delivered with ease.		Recovered as well as usual	Living	He thinks, if she had not been carefully watched, hemorrhage might at last have come on when no one was near, as in Cases 14 and 15.
Pains came on unattended by bleeding, and it increased with the pains.	Turning.		Saved	Not stated	
For several days, slight pains, and an increasing discharge of blood; just before I was sent for, it was very rapid, and a large amount lost.	Turned with ease.		Recovered though extremely faint and languid	Dead	
During 3 or 4 weeks, occasional slight bleeding; alarming bleeding and pains came on; labor came on 10 days after.	Delivered by the feet.		Recovered	Living	
On 10th, slight pains and slight but increasing discharge; true labor came on 2 days after, and hemorrhage considerable.	Placenta pierced by hand and child turned.		Recovered	Not stated	
Had hemorrhage for more than a month, increasing of late; slight pains at intervals, causing a fresh flow. (Had a fall at commencement of hemorrhage.)	Delivery at once attempted, but fingers could not pass; at the instant of complete syncope, hand passed in, and turning effected.	Came away in a few minutes, and hemorrhage soon stopped.	Recovered	Dead	
Discharge for some hours, and slight pains.	Fœtus and placenta expelled in an hour.		Recovered		
Some bleeding at beginning of labor; increasing in same degree as pains; much blood had been lost.	Delivered by turning with ease.		Recovered as usual	Dead	
Had several attacks for some days; now more profuse.	Delivered at once easily by turning.		Recovered	Not stated	Discharge immediately stopped.
	At once, by turning with ease.		Recovered as usual	Living	
Hemorrhage came on in labor.	By feet; easily.	Came away soon.	Recovered happily	Not stated	
For some hours, had been flooding excessively.	Delivered at once by turning.		Recovered; very weak for weeks	Not stated	
Considerable bleeding came on with labor.	Delivered at once by feet.		Recovered	Not stated	
Been in labor, and flooding, the greater part of the day.	Delivered at once by the feet.		Recovered speedily	Not stated	

TABLE I.—*Recoveries after*

NO.	BY WHOM AND WHERE REPORTED.	AGE.	NO. OF PREGNANCY AND GENERAL HEALTH.	PERIOD OF PREGNANCY.	PARTIAL OR COMPLETE.	STATE OF OS UTERI.	PRESENTATION.	GENERAL CONDITION AT TIME OF DELIVERY.
78	Rigby's Essay, Case 61.			8th month	Complete	Little dilated at first.	Apparently head	
79	Ibid., Case 62.			Full time	"At the mouth"	Partially dilatable.	Apparently head	
80	Ibid., Case 66.		Small, delicate, sickly		"Presenting"			Much reduced.
81	Ibid., Case 68.		Had several	Near full time	Complete	Considerably open, and dilatable.		
82	Ibid., Case 69.				Fixed to os			
83	Ibid., Case 75.		Had borne several; small, sickly, emaciated, and enfeebled by disease	7½ mos.	"Presenting"	Os little open.	Apparently head	Had a very great loss, and was in a deplorable state.
84	Ibid., Case 78.		Bad health; 2d pregnancy	5th month	"At the mouth;" complete		Arm and head	
85	Ibid., Case 83.		9th child	Full time	Complete	Considerably dilated.	Presumed head	In evening, very languid.
86	Ibid., Case 87.		4th child	Full time	"Fixed to os"	"Very loose."	Presumed head	Very languid, and evidently in much danger from what she had lost.
87	Ibid., Case 88.				"At the os"		Presumed head	
88	Ibid., Case 96.			7th month	Adhering to os			Had lost considerable blood.
89	Ibid., Case 97.		Delicate; tender constitution, multipara	Beginning of 9th month	"Attached"	"Little open," but dilatable.		
90	Ibid., Case 101.		Very active; borne 9 or 10	Full time	Complete; "filled up"	Considerably dilated.	Presumed head	She sank instantly, and a most formidable fainting induced.
91	Ibid., Case 105.			8th month	Complete	Considerably dilated.	Presumed head	Very faint, and flooding at every pain.
92	Madame Lachapelle, ii. 427.	27	Little robust; sanguine temperament; 1st pregnancy	Middle of 7th month	Placenta filled the os	On admission, little dilated.	Head	Some pain on admission, which increased.
93	Ibid., p. 431.	28	5th pregnancy	7th month	"Tout voisin de l'orifice"	Dilated.	Feet	
94	Ibid.	38	Sanguine temperament; 2d pregnancy	8th month	Felt the edge of the placenta	Dilatable, but little open.	Feet	

Turning, &c.—Continued.

AMOUNT AND DURATION OF HEMORRHAGE BEFORE DELIVERY.	MODE OF DELIVERY.	DISPOSITION OF PLACENTA.	RECOVERY.	FATE OF CHILD.	REMARKS.
Suddenly seized with profuse flow.	Waited awhile, and turned with more than usual difficulty.		Recovered	Not stated	
Labor began with considerable flooding, and not seen for some hours.	Delivered by turning.		Recovered	Not stated	
Two hours before, pains and some bleeding came on; lost a great deal of blood in a very little while.	"With very little trouble."	Withdrawn.	Recovered	Not stated	
Very much reduced, and flooding for several hours.	With very little trouble.		Recovered	Not stated	
Separation on approach of labor; lost a good deal of blood before uterus would allow of delivery.	"Forcible delivery."		Recovered	Not stated	
Frequent floodings from 3d month to middle of 7th, and then suddenly became very profuse.	Forced in fingers one by one, and almost the hand; womb small, and delivered by the feet.	Withdrawn, and appeared to have been long detached.	Recovered after a very long time	Not stated	Little hemorrhage followed.
Seized with pain and considerable bleeding.	Perforated the placenta, and turning attempted, but failed; expelled in 4 hours by true pains.		Eventually recovered		Bleeding at once ceased.
Labor came on with flooding in forenoon; at noon, very copious and pains abated.	Turned with very little difficulty.		Recovered	Living	
Labor began with very formidable discharge.	Delivered at once by turning, with ease.		Eventually recovered	Not stated	
Found her flooding considerably.	Delivered at once by turning, with ease.		Recovered	Living	
Considerable hemorrhage took place.	Delivered at once by turning, with ease.		Recovered	Living	
Some hemorrhage in middle of 7th month; returned and became alarming at this time.	Delivered at once by turning, with ease.		Recovered; nearly as well as ever	Living	
Some hemorrhage month before; it came on at full time, not severely, in evening; at 5 A. M., sudden pain and excessive gush.	Delivered at once by turning, with ease.		Rallied after several hours and recovered	Not stated	
Slight discharge and pain day before; discharge increasing through the night.	Delivered at once by turning, with ease.		Recovered perfectly	Dead	
Repeated losses of blood at 7th month; on admission, tampon; twice reapplied.	Delivered after a while, when os judged to be sufficiently dilated, with ease.	Expelled spontaneously.	Recovered	Dead	
Slight pains and bleeding came on after a fall; membranes broke.	Feet at once drawn down.	Escaped readily.	Recovered	Dead	
Experienced suddenly, in 7th month, a hemorrhage, which was arrested; renewed in end of 8th mo., and, on admission, lost it in great abundance.	The membranes were ruptured; bleeding ceased, and child expelled in 2 hours.	Extracted readily.	Recovered	Dead	

TABLE I.—*Recoveries after*

NO.	BY WHOM AND WHERE REPORTED.	AGE.	NO. OF PREGNANCY AND GENERAL HEALTH.	PERIOD OF PREGNANCY.	PARTIAL OR COMPLETE.	STATE OF OS UTERI.	PRESENTATION.	GENERAL CONDITION AT TIME OF DELIVERY.
95	Mad. Lachapelle, p. 432.	21	1st pregnancy	Near 8th month	Partial	Partially open, and dilatable.	Head	
96	Ibid., p. 441.			8½ mos.	Complete	Permitted delivery.	Presumed head	The tampon increased the pains and the hemorrhage, which had now come on; she grew feeble, and it was withdrawn.
97	Ibid., p. 443.	29	1st pregnancy	End of 7th month	Partial	Little open, but dilatable.	Head	
98	Ibid., p. 451.	43	Large, spare, but of good health; 3d or 4th pregnancy	9th month	Apparently complete	Dilated.	Head	Extremely feeble; almost continual faintings; general coldness; frequently pulseless; dejected and despondent; pains strong and frequent.
99	Ibid., p. 463.		Lymphatic; good health; 1st pregnancy	End of 8th month	Apparently partial	Os partially dilated.	Head; occiput posteriorly	Much affected by loss of blood; prognosis was alarming.
100	Monthly Journ. Med. Sci., Mar. 1851, p. 228; Wm. Smellie.		6th child	8th month				Vagina was plugged, and pains came on.
101	N. York Journ. of Med., 1849, p. 315; C. L. Mitchell.	35	Nervous temperament and feeble health; mother of several children	7th month		Os open, admitting end of finger; soft and yielding, and an inch thick; plugging at end of 1½ hrs.; os size of quarter of dollar; thin.	Head	No labor pains; pulse barely felt; arms and legs cold; could not raise the hand to the head or speak above a whisper; irregular respiration, and sense of constriction in the lower end of sternum.
102	Ibid., Mar. 1851, p. 276; Dr. Jas. Furgusson.		4th pregnancy	Period full	Partial		Head	
103	Smellie's Cases, vol. ii. collection 18, No. 3, Case 4, p. 271.		Multipara	Beginning of 9th month			Head	Pains at long intervals.
104	Ibid., p. 277.			Period full	Complete	When first seen, os the size of a crown; some hours after, fully opened.		
105	Ibid., Case 8.			Last of 8th month		Os a little open; advised the doctor to dilate gently during each pain.	Head	Had lost a great deal of blood, and had fainting fits.

Turning, &c.—Continued.

AMOUNT AND DURATION OF HEMORRHAGE BEFORE DELIVERY.	MODE OF DELIVERY.	DISPOSITION OF PLACENTA.	RECOVERY.	FATE OF CHILD.	REMARKS.
Hemorrhage in 6th mo., then in 7½ month; was arrested, and returned from getting up; when near 8th month, pains came on.	Membranes broke; head came down and arrested the hemorrhage, and delivered soon.		Recovered after great peril	Living	Hemorrhage after delivery, from a portion of placenta remaining.
Had for some days slight hemorrhage; reappeared in 3 or 4 days, and ceased; 2 days after this it returned; tampon.	Practised version, and delivered her.		Recovered by 8th day	Dead	Placenta covered by blackish crust.
Got a kick in the loins, and the waters escaped; pains came on and a very considerable hemorrhage.	Delivered by turning, with ease.	Hemorrhage ceased immediately.	Recovered	Putrid	
On admission, had had hemorrhage for 8 days; free bleeding came on on admission.	Placenta forced into vagina by the pains; passed in the hand, and delivered instantly.	Placenta followed the child, and hemorrhage ceased completely.	Was extremely low for some days but was convalescent in 3 weeks	Dead	Spasmodic trembling came on after delivery, as in preceding bad cases; fœtus not deprived of blood. (See *op. cit.*, p. 453.)
A slight hemorrhage at date; returned in 5 days, with pain, and continued abundant.	Rupture of the membranes had had no effect on the hemorrhage; forceps applied, and delivered with ease.	Placenta extracted; no further hemorrhage, but extreme exhaustion.		Living	Placenta exhibited a dark patch, where it had adhered; and she maintains that, when *over* the os, hemorrhage comes on in 6th or 7th month; by the side, it comes on later.
For 2 weeks, a constant oozing of blood from vagina; for 8 days, felt no life; for 3 days, discharge much increased.	When attempt to detach failed, hand was thrust through the placenta; child turned and delivered.	When pains came on, plug was removed, and, an attempt to detach the placenta "not readily succeeding, and flooding returning, it followed the child."	Recovered after an attack of fever	Dead; cord 3 times around the neck	
Awakened by general sense of uneasiness, and found free hemorrhage from vagina; had been bleeding thus considerable for 1 hour; no previous hemorrhage; hemorrhage continued profuse.	At end of 2½ hours, the hand was introduced, the placenta first encountered; the head seized, and the fœtus and membranes withdrawn entire.		Recovered	Dead	No unusual hemorrhage accompanied the withdrawal.
Considerable hemorrhage "prior and subsequent to delivery."	Waters escaped; pains insufficient; hemorrhage continuing; ergot given.	The body followed, "with the placenta."	Recovered	Dead for some time	
Taken with flooding the previous night; had occasional attacks during the preceding month; flooding severe.	Membranes sought for at edge of placenta and torn; waters escaped, and the head advanced.		Recovered		The flooding abated when the waters were discharged, and was entirely stopped as soon as the head plugged the os.
When pains came on, some blood flowed; hemorrhage not great; some hours after, pretty violent.	Then ruptured the membranes and turned.		Recovered	Living	
Taken about 24 hours before with large hemorrhage, and now and then a slight pain.	Os dilated in a few pains, and child expelled.	As the head descended, the detached part tore off, and passed down with it, 15 or 20 minutes before delivery.	Recovered	Alive and did well	Flooding ceased when waters escaped; death of child expected from laceration of placenta.

TABLE I.—*Recoveries after*

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106	Smellie's Cases, vol. iii., collection 33, No. 2, Case 5, p. 128.		Very weak habit, and in great affliction	Period full	Partial	Os fully dilated.		Excessively weak and low from violent flooding; had had some pains.
107	Ibid., Case 6.				Partial	In the evening, rigid and of size of a half-crown; in the morning, found largely open.	Head and funis	Pains came on in evening, and occasional during the night.
108	Ibid., Case 14.		Thin habit; slender constitution	Full time	Complete	Scarce admitted the fore-fingers.		Pulse scarcely to be felt; cold sweat and free hemorrhage.
109	Thomas Wheelwright, London Lancet, 1839–40, ii. 109.	26	Delicate, small, pallid	End of 9th month		Size of a crown, an hour and a half from beginning of labor; soft and yielding.	Head	Each pain attended by a gush, but not alarming; pains strong throughout.
110	N. York Lying-in Asylum, N. York Journ. of Med., March, 1851, p. 277.		4th pregnancy		Partial	Os well dilated.	Head	
111	Dr. Moulton, of New Rochelle, communicated by.	20	3d pregnancy	8th month	Complete; not central	2 inches in diameter, and dilatable.		
112	Dr. D. H. Storer, communicated by.		Multipara					Considerably exhausted.
113	Dr. L. Shanks, of Memphis, Tenn., communicated by.	40	Large size; mother of 8 or 10	7th month	Complete	Os relaxed; pelvis large.	Head	Was faint and exhausted, and almost drained of blood.
114	Mr. Radford, in London Lancet, 1847, i. 297.			7½ mos.	Complete		Head plug	No hemorrhage.
115	Ibid.			8½ mos.	Complete		Head	
116	Ibid.					Os rigid; plugged.		
117	Ibid.			Full time	Complete	Os rigid.		
118	Dr. H. G. Cox, Amer. Medical Monthly, Oct. 1854, p. 280.	25	2d child	Presumed full	Partial	Equalled 2 inches.	Head	
119	Ibid.		4th child	Presumed full	Partial		Head	

Turning, &c.—Continued.

AMOUNT AND DURATION OF HEMORRHAGE BEFORE DELIVERY.	MODE OF DELIVERY.	DISPOSITION OF PLACENTA.	RECOVERY.	FATE OF CHILD.	REMARKS.
Hemorrhage had been very violent.	Ruptured the membranes, and delivered the child.	Placenta followed the child.	Rallied with great difficulty and recovered	Living	
Sudden violent hemorrhage came on in the morning, an hour before the visit, and continued.	Ruptured the membranes; turned, and brought down the legs; the flooding diminished; rested a half hour, and then delivered her.	Secundines followed.	Recovered in 3 weeks	Living	
Slight a week before; repeated since; came on very profuse during the day.	Gradually dilated the os till it admitted the hand; "broke through" the placenta; pierced the membranes; turned, and delivered easily.		Recovered contrary to expectation	Living; had its arm broken	Subsequent discharge trifling.
At end of 8th month, fell with violence, and had hemorrhage frequently recurring until 9th month.	Soon passed the finger by the placenta, and ruptured the membranes.	Placenta about half expelled before the head; returned it by the side of the head; delivery took place almost at once; it shortly passed.	Recovered entirely; getting strong slowly	Dead	
Considerable previous hemorrhage.	Pains insufficient; ergot given; spontaneous expulsion.	Expelled after the child.	Recovered	Dead for some time	
Had hemorrhage at 7th month; was pretty copious; and also at 8th month; had lost, perhaps, a quart, and had pains.	Vagina was plugged for an hour; it was then removed; turned, and delivered by the feet; from time when called to the birth, one hour and a half.	Expelled after the child.	Recovered	Living	After turning, hemorrhage ceased; ergot given before turning.
There had been much hemorrhage.	Turning.		Recovered	Dead	
Profuse flooding came on, and had for last 8 or 10 hours when he arrived.	Introduced the hand, and brought down the fœtus by the *head;* mother apparently insensible.	Delivered after the fœtus, and was nearly detached.	Slowly but perfectly recovered	Dead	
Severe hemorrhage at 6th month; returned in 2 weeks; after which, child not felt; labor came on 6 weeks after 1st attack, *without bleeding.*	Spontaneous expulsion.		Recovered probably	Long dead	No loss of blood after expulsion; placenta considerably changed.
Excessive hemorrhage at 7th month; no pain; plugging, &c.; bleeding returned in a month, and pains came on 2 weeks after this.	Separated the edge of placenta; turned, and delivered.		Recovered probably	Dead some time	There was no flooding.
Flooding from 7th mo., and 8th repeated several times, the last so violent as to be dangerous; plugged; labor came on in 2 weeks.			Recovered probably		
Excessive hemorrhage at 8th month; plugged; child not felt after.	Placenta partly detached, and membranes ruptured; spontaneous expulsion.		Recovered probably	Putrid	Placenta much altered.
Almost pulseless; clothes and bed saturated with blood; had had hemorrhage occasionally for a week previous.	Head descended and compressed placenta; stimulants; expulsion spontaneous.		Recovered	Living	
Hemorrhage came on with labor.	Head compressed placenta; spontaneous expulsion.		Recovered	Living	

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120	Dr. H. G. Cox, Amer. Medical Monthly, Oct. 1854, p. 280.	24	2d child	Good health; full time	Complete	When admitted, allowed the finger; in 9 hours, 1½ inches.	Face	"Strength somewhat diminished."
121	Ibid.		2d child	7th month	Partial			Little bleeding; pains subsiding, and patient feeble.
122	Ibid.	40	11th child	9th month; good health	½ attached	Dilated to 2 inches.	Breech	Had bled very largely; pulse scarcely to be counted.
123	Dr. L. Shanks, of Memphis, Tenn., communicated by.	28	Medium size; 5th pregnancy	7th or 8th month	Complete	At first, dilated about an inch.	Head	At midnight called.
124	Ibid.	18	Primipara; small size	Full time	Partial	Partially open, and dilatable.		So exhausted as to require immediate delivery.
125	Dr. Willard Parker, of N. York, communicated by.	40	10th pregnancy	Near full time	Complete			
126	Mauriceau, according to Dr. Lee's table in London Lancet, 1847, ii. 439, No. 8; date, 1669.				Placenta partially expelled		Foot and knee	
127	Ibid., Case 55; Ann. 1672.			7th month				Faintness.
128	Ibid., Case 59; Ann. 1672.			6½ mos.		Os gently dilated.		Frequent syncope.
129	Ibid., Case 68; Ann. 1672.							
130	Ibid., Case 106; Ann. 1674.			7th month				
131	Ibid., Case 176; Ann. 1676.			8th month				
132	Ibid., Case 210; Ann. 1678.			7th month				
133	Ibid.; Ann. 1678.							
134	Ibid., Case 423; Ann. 1686.			8½ mos.				
135	Ibid., Case 428; Ann. 1686.			9th month				
136	Ibid., Case 454; Ann. 1686.			7th month				
137	Ibid., Case 597; Ann. 1690.			7th month			Arm	
138	Ibid., lvii.; Ann. 1696.			8th month				Threatened with death
139	Portal, according to Dr. Lee, in Lancet, 1847, ii. 548, Case 2, 1664.				Complete	Open to size of a crown; thin.		
140	Ibid., Case 29; 1671.			8th month	Complete		Head	Greatly exhausted
141	Ibid.			8th month				Similar to last.
142	Ibid., Case 41; 1672.				Complete	Size of 30 sols piece.		Extremely weak; repeated syncope.

Turning, &c.—Continued.

AMOUNT AND DURATION OF HEMORRHAGE BEFORE DELIVERY.	MODE OF DELIVERY.	DISPOSITION OF PLACENTA.	RECOVERY.	FATE OF CHILD.	REMARKS.
Had slight hemorrhage a month before; was awakened by a gush of blood; lost 3 pints; continued.	Passed hand, turned, and delivered.	Delivered with child.	Recovered and discharged; on 22d day, an attack of inflammation of peritoneum	Dead	
Bleeding had been very alarming.	Turning.		Recovered	Dead	
Had hemorrhage several times.	Feet brought down.	Child and placenta removed together.	Recovered on 10th day	Dead; "anæmic"	
Profuse bleeding came on during sleep, producing syncope; she had had 2 or 3 slight turns a few weeks before.	Placenta separated on one side, and membranes ruptured by a pin; morphia and ergot given; repeated next day; delivered by forceps.	Delivered after the child.	Recovered favorably	Partially putrid	But little bleeding after rupture of membranes.
From 7th month, occasional slight hemorrhages; at full time, labor pains caused bleeding, which lasted 15 or 18 hours.	Os dilated; turning, and head delivered by forceps.		Recovered well	Living and did well	Mother faint and exhausted after delivery.
	Separated the placenta on one side; ruptured the membranes; turned, and delivered.		Saved	Saved	
	Placenta pressed back, and child extracted.		Recovered		
	Turning.		Recovered		
Flooding for 6 hours.	Delivered by turning.		Recovered	Living	Masses of coagula expelled after delivery.
Flooding for a month.	Labor pain; turned.		Recovered	Living	
	Entire ovum extracted or expelled.		Recovered		
	Turning.		Recovered	Dead	
Great flooding.			Recovered		Prolapsus funis.
	Turning.		Recovered		
Flooding for 4 weeks.	Turning.		Recovered		
Dangerous, of 4 weeks continuance.	Immediate turning.		Recovered		
			Recovered		
Great floodings.	Turning.		Recovered	Living	
Great and repeated hemorrhages.	Promptly delivered.		Recovered	Living	
Great weakness and loss of speech from hemorrhage; profuse hemorrhage for 8 days.	Delivered at once by turning, separating the placenta, and rupturing the membranes.		Recovered		
Profuse hemorrhage for 3 weeks.	Head was forced by pains through the placenta.		Recovered		Body almost drained of blood.
			Recovered		
Had had very considerable discharge; hemorrhage ceased 1 day; renewed.	Membranes ruptured; hand passed in turning.	Placenta extracted.	Recovered		

TABLE I.—*Recoveries after*

NO.	BY WHOM AND WHERE REPORTED.	AGE.	NO. OF PREGNANCY AND GENERAL HEALTH.	PERIOD OF PREGNANCY.	PARTIAL OR COMPLETE.	STATE OF OS UTERI.	PRESENTATION.	GENERAL CONDITION AT TIME OF DELIVERY.
143	Portal, according to Dr. Lee, Lancet, 1847, ii. 548, Case 51; 1672.					7 lines in diameter.		In greatest danger.
144	Ibid., Case 55; 1672.						Umbilicus and placenta	
145	Ibid., Case 79; 1682.			7th month	Complete	Os slightly open; size of a crown.		Syncope; apparently insensible and dead.
146	W. Henderson, London Lancet, 1846, i. 144.	32	Had one miscarriage	Presumed full	Complete	Size of a crown piece, and dilatable.	Presumed head	"Pale, sick, and sleepy;" retching pains, accompanied by gushes.
147	J. Chalie, Lond. Lancet, 1846, ii. 428.		2d pregnancy	Presumed full	Complete	Rigid.	Presumed head	For several hours, little change in os; hemorrhage passive; near exhausted in delivery of trunk; head separated, and subsequently expelled.
148	John L. J'On, in London Lancet, 1845, ii. 644.	30	5th pregnancy	End of 7th month	Complete	Rigid at first; plugging; dilatable at delivery.	Apparently head	Hemorrhage and pains had ceased; ergot been given, which caused contractions.
149	R. Barnes, Lond. Lancet, 1847, i. 327.		3d pregnancy	7th month	Partial	Size of crown piece; soft and dilatable; membranes very firm.	Breech	No urgency; pains strong.
150	Ibid.		5th pregnancy	Beginning of 9th month	Partial	Dilated, after plugging to the rim of a wineglass.	Foot	
151	London Lancet, 1847, i. 412; from L'Union Médicale, April, 1847.		8th pregnancy	Full	Partial	Size of 5 shilling piece; dilatable.	Transverse hip; hydrocephalic	Alarming.
152	Dr. Smith, Lond. Lancet, 1847, ii. 121.	34	7th pregnancy; robust; 6 stillborn	Apparently full	Presenting a small portion	Dilated.	Foot	Internal hemorrhage, but very slight external, before placenta felt.
153	W. S. Gill, Lond. Lancet, 1847, ii. 93.	48	8th labor; weak and emaciated	Full	Complete and firmly adhered	Rigid; admitted the hand.	Presumed head	Faint and exhausted; pains entirely absent.
154	Ibid.	30	5th pregnancy	8th month	Complete	Very slightly dilated.	Presumed head	Syncope.
155	Ibid.	35	11th pregnancy; robust	Apparently full	Complete	Dilatable.	Presumed head	Pallid, with more than usual exhaustion.
156	R. Martin, Lond. Lancet, vol. i., 1848.				Apparently partial			
157	E. Y. Steele, L. Lancet, 1848, i. 282.	40	7th pregnancy	Full	Complete	2 inches in diameter; and flaccid.	Head	"Appeared in articulo mortis;" had had no pain.

Turning, &c.—Continued.

AMOUNT AND DURATION OF HEMORRHAGE BEFORE DELIVERY.	MODE OF DELIVERY.	DISPOSITION OF PLACENTA.	RECOVERY.	FATE OF CHILD.	REMARKS.
Delivery the only hope.	Gradually dilated the os; carried the hand by the side of the placenta to the fundus.		Recovered	Living	
	Turning.		Recovered	Dead	
Profuse hemorrhage.	Delivered by turning.		Recovered		
Occasional for 2 weeks; during 6½ hours profuse.	Turning.	Rupturing the placenta and membranes.	Recovered	Dead	Placenta 9 inches in diameter.
Over 13 hours.	Forced 2 fingers through the placenta, and turned; ergot having been given through 3 hours.		Recovered	Putrid	Internal hemorrhage had been going on.
Repeated during 2 or 3 weeks, and hemorrhage returned with pains.	Turning easy.	Placenta expelled 15 minutes after the child.	Long recovery	Dead 3 or 4 hours	
Had been flowing for 2 weeks; during 6½ hours moderate.	Membranes ruptured; child expelled at once.	Withdrawn in 10 minutes and hemorrhage ceased.	Recovered	Dead	
Hemorrhage had been profuse until after plugging; it was felt detached; after this, it ceased entirely.	Membranes ruptured; feet brought down.	Thrown off; the part that had been detached was plugged.	Presumed recovery	Lived 2½ hrs.	When placenta found pretty extensively detached, it is said that the "hemorrhage, which has been considerable, is now moderate;" placenta was paler at one portion than elsewhere, and somewhat infiltrated with blood; the part which had been adherent had become detached.
Frequent attacks.	Turning.		Recovered	Decomposed	
Pains continued.	Ether; pains aided by extraction.	Some hemorrhage arrested by pulling off placenta.	Recovered	Dead	
It had been profuse.	Turning after dilating the os; perforation of the placenta.		Recovered after extreme peril	Living	Excessive hemorrhage after delivery.
"Immense extent."	Turning after perforation of placenta.		Recovered with difficulty.	Living	Excessive hemorrhage followed.
Profuse.	Turning after perforation of placenta.		Tedious recovery	Living	Attempt to detach placenta; given up from excessive pain and increased hemorrhage; no hemorrhage after delivery.
Delivered before extreme symptoms.	Passed hand by placenta, and turned, and delivered.		Recovered	Living	
Almost constant for 10 days.	Passed hand by the separated portion; turned and delivered.	Uterus expelled it in 10 minutes, without flooding.	Recovered slowly	Dead	Pressure of head on placenta caused cessation of hemorrhage, and pains came on.

TABLE I.—*Recoveries after*

No.	By whom and where reported.	Age.	No. of pregnancy and general health.	Period of pregnancy.	Partial or complete.	State of os uteri.	Presentation.	General condition at time of delivery.
158	E. Y. Steele, L. Lancet, 1848, i. 282.	24				Equalled crown piece, and rigid.	Head	Hemorrhage very profuse; danger imminent; uterus firmly contracted and waters gone.
159	Dr. Reid, Lond. Lancet, 1848, i. 313.		9th pregnancy	7½ mos.	Partial	Dilatable.	Head	"Much exhausted by loss of blood;" no pains until attempted dilation, a few minutes before delivery.
160	W. F. Askham, London Lancet, 1848, ii. 422.	40	6th pregnancy	Full	Partially detached; complete	Dilatable.	Shoulder	Blanched; restless; almost pulseless.
161	J. H. Davis, in London Lancet, 1848, ii. 423.			Presumed full	Partial	Dilatable.	Head	Blanched and enfeebled.
162	Ibid.	29	3d pregnancy	7th month	Partial	Rigid; size of a shilling piece; relaxed by chloroform.	Presumed head	Much weakened; pains trifling and irregular.
163	W. W. Jones, in Prov. Med. and Surg. Journal, 1845, p. 711.	30	5th pregnancy	9th month	Edge dipping over the os	Very flabby; fully dilated.	Head	Very much reduced, and greatly alarmed.
164	J. H. Davis, in London Lancet, 1849, ii. 293.	26	4th pregnancy	Apparently full time	Apparently partial	Os at first undilated; at last, admitted 3 fingers; from 2 to 3 hours in dilating.	Not stated	Blanched; quick, weak pulse; no restlessness.
165	G. F. Knipe, in London Lancet, May, 1851, i. 599.	34	4th pregnancy	End of 8th month	Partially detached; complete	Slightly open, but dilatable.	Head	Been in labor, and bleeding also, for 5 hours; skin cold and clammy; almost pulseless; no pains for 2 hours.
166	S. Henson, Lond. Lancet, June, 1851, i. 620.	35	Strong and healthy; 10th pregnancy	Full period	Complete	Os dilatable.	Hand	There had been a good deal of bleeding between the pains; pains had ceased; bleeding slight; pulse good.
167	W. Nix, London Lancet, 1851, ii. 224.				"Over the os"	Soft and yielding.		Talked incoherently, and was restless.
168	R. B. Jordison, London Lancet, 1844, ii. 157.				Complete	Crown piece.	Presumed head	
169	A. J. Simpking, London Med. Gaz., Jan. 1846, p. 175.	26	2d pregnancy	Just viable	Complete	Dilatable.	Head	Suffered from inflammation of saphena veins; did not know she was pregnant.
170	Dr. E. Skae, reported to Edinburgh Obstet. Soc.; in Month. Journ., 1848, p. 198.		3d pregnancy; 2 previous labors preternatural	About full	Complete	Well dilated.	Head	Apparently not urgent; had been plugged by a midwife.
171	Dr. Rigby, Lond. Med. Gaz., xiv. 367.				Covered to extent of a third	Crown piece at time of examination.	Head	Weak, not faint; pulse tolerably good; had lost a good deal of blood; pains very slight.

Turning, &c.—Continued.

AMOUNT AND DURATION OF HEMORRHAGE BEFORE DELIVERY.	MODE OF DELIVERY.	DISPOSITION OF PLACENTA.	RECOVERY.	FATE OF CHILD.	REMARKS.
Repeated during a week.	Hand introduced; pains became vigorous; pressure on placenta stopped hemorrhage; turned; delivered in an hour.	Expelled in 20 minutes after the child.	Recovered	Dead	
Bleeding for a short time before plugging.	Waters drawn off by a trocar; ergot and plug.	Extracted immediately after the child.	Recovered	Dead	
For a month, had hemorrhage after slightest exertion, and still losing blood.	Passed hand along the edge of placenta; ruptured the membranes, and turned.	Placenta followed quickly.	Recovered slow but protracted	Dead	Hemorrhage ceased, and she rallied.
Had been in labor, with flowing, for 2 days.	Turning.	Was expelled.	Recovered	Presumed dead	
Labor had lasted 24 hrs., with more or less hemorrhage; now very considerable.	Turning, after chloroform had relaxed os uteri.	Immediately expelled.	Recovered	Dead	
Light during 9 or 10 days, and continual at 6th month, and more or less every day during last month; had been very free for 2 hours.	Ruptured membranes, and brought down feet; delivery took place soon.	Placenta followed immediately.	Doing well	Alive	
Had hemorrhage during 2 days and was plugged.	Brought down the foot and leg, and left to spontaneous expulsion.	Hemorrhage after delivery, which was arrested by removal of placenta.	Recovered	Not stated	
20 days before, had hemorrhage after a walk, and severely deluged in blood.	Hand passed by placenta, after dilating the os, and feet brought down; no contractions; ergot; born in half an hour.	Placenta expelled in a few minutes after, with large masses of coagula.	Recovering	Not stated	After expulsion of placenta, no more hemorrhage than usual.
No hemorrhage during pregnancy.	Passed the hand *through* the placenta; after several trials, drew down a foot.		Recovered	Dead	
Occasional for 2 or 3 days; became very alarming.	Passed hand through placenta, and turned; rested, and delivered.	Removed placenta soon.	Recovered	Dead	Very little hemorrhage after bringing down the child or removing the placenta.
Slight for some weeks, and a few days before violent and became very profuse.	Dilated the os, separated a portion of the placenta, and brought down feet and body.		Recovered	Living	
During 16 days, free hemorrhage; plugging of the vagina.	Stimulants and ergot given, and fœtus expelled.	Expelled in 10 minutes.	Recovered	Lived 20 minutes	Child just viable; hemorrhage gradually ceased after birth of the child; placenta 11 and 9 inches in diameter; weighed 18 ounces; one edge covered with clots for 3 inches.
Hemorrhage 5 days previous; found there had been considerable flooding.	Repeated attempts to drag away placenta by midwife; membranes ruptured by hand; pains came on; expelled in 10 minutes.	Forced by pains towards sacrum; followed fœtus immediately.	Recovered	Dead	
Hemorrhage 3 weeks before, and again at labor.	Ergot produced compression of placenta; suppression of hemorrhage, and expulsion of the child in a short time.		Apparently got well	Dead	

TABLE I.—*Recoveries after*

No.	BY WHOM AND WHERE REPORTED.	AGE.	NO. OF PREGNANCY AND GENERAL HEALTH.	PERIOD OF PREGNANCY.	PARTIAL OR COMPLETE.	STATE OF OS UTERI.	PRESENTATION.	GENERAL CONDITION AT TIME OF DELIVERY.
172	Dr. Rigby, Lond. Med. Gaz., xiv. 367.	27	4th pregnancy; healthy	Full time	Complete	Admitted 4 fingers, and dilatable.	Head	No pulse at wrist; not easily roused; scarcely any pain.
173	Dr. Jameson, in Dublin Medical Journal, 1836, p. 389.		9th child		Partial	Os size of a crown piece.	Head	Had not suffered.
174	Ibid., p. 390.			8th month	Complete	Size of a half-crown; very rigid.	Head	To all appearance dead; pulseless; pallid; cold, clammy sweat; "uterus by no means in action."
175	Dr. Alex. Tyler, Dublin Medical Journal, 1847, p. 362.				"Placenta presenting"	Not fully dilated.		No pulse perceptible; great prostration.
176	Ibid., p. 363.		9th pregnancy		"Placenta presenting"	Well dilated.		"Dangerous state from loss of blood."
177	Ibid.					Os size of a shilling at first; plugging; in 2¼ hours, size of a crown piece; plugging; in a few hours, admitted the hand.		A gush at each pain.
178	Ibid.		6th pregnancy	Full time	Complete	Undilated at first; plugged, and, in 2 hours, plug expelled; os dilated.	Head	Skin cold and clammy; faint and thirsty.
179	Ibid., p. 366.	31	2d child	Apparently full	"A lip of the placenta"	Well dilated.	Arm	Nothing apparently urgent.
180	Ibid.				Complete			Very exhausted from loss of blood.
181	Mr. Stewart, in Med. Clinical Trans., iv. 358.			7th month	Complete	Admitted two fingers.		Very alarming; countenance ghastly; extremities cold; lips pallid; tremors; thirst and vomiting; low delirium; pulse occasionally perceptible; hemorrhage somewhat abated.
182	Wm. Simpson, London Lancet, 1839–40, i. 492.				Complete	Os size of a crown piece; gave ergot, and, in 1¼ hours, dilated to fullest extent.		Pains frequent and regular; hemorrhage increased by ergot.
183	T. S. Wells, in London Lancet, 1839–40, ii. 19.		Robust and young; 1st child	Full time	Complete	Size of a shilling; rigid; vagina plugged.		After plugging, pains regular, but no hemorrhage; at the end of 6 hours, the placenta forced out and a great gush of blood.
183 (*a*)	Dr. I. Fountain, communicated by.			Full time	Complete	Partially dilated; dilatable.	Head	
183 (*b*)	Ibid.			Full time	Complete	Partially dilated; dilatable.	Head	

Turning, &c.—Continued.

AMOUNT AND DURATION OF HEMORRHAGE BEFORE DELIVERY.	MODE OF DELIVERY.	DISPOSITION OF PLACENTA.	RECOVERY.	FATE OF CHILD.	REMARKS.
Suddenly seized with a profuse hemorrhage, and sent for a midwife.	Ruptured membranes; no pulsation in cord; brought down a foot, and delivered the trunk; gave ergot; head born some time after.	Placenta quickly expelled.	Not stated	Dead	No hemorrhage during or after the operation.
Been in labor 4 hours, and hemorrhage at each pain.	Ruptured the membranes, and pressure of the head stopped the bleeding; child born in 1 hour.	Followed in 10 minutes.	Recovered	Not stated	
Very profuse hemorrhage during 2 hours, and continued.	Plugged; gave stimulants; and, as reaction and pains returned, fingers passed by placenta, and membranes ruptured; child born in 2 hours.		Not stated	Dead 2 days	Hemorrhage ceased on escape of the waters.
Very profuse and alarming during 12 hours.	Turning and delivery, occupying ¾ of an hour; stimulants constantly administered.		Recovered	Dead	
	Passed the hand between the placenta and uterus, and brought down a foot; delivery soon completed.		Recovered	Living	Hemorrhage ceased completely when foot brought down.
Hemorrhage a month before; repeated in 10 days, and 8 or 10 pains every day for 5 days, with flooding at each.	By turning.		Recovered	Living	
Copious hemorrhage at 3 P. M.; lost several pints before half past 11.	Separated the placenta; passed in the hand, ruptured the membranes, and delivered in 15 minutes.	Was removed.	Recovered	Dead	
Hemorrhage at intervals during 4 days.	Turning.		Recovered	Dead	
	Membranes ruptured; delivered by crotchet, on account of depression.		Recovered	Dead	
Flooded excessively for a month previous; discharged at least a pint of blood daily.	Gave tr. opii 80 drops; in 20 minutes, 120 drops; in 1 hour, placenta separated on one side; hand passed by it; feet brought down; 80 drops more given; fœtus easily extracted.	Separated immediately after by the hand, and gradually extracted from the vagina.	Recovered	Dead	
Five days before, had very profuse hemorrhage for 24 hours; arrested for 5 days; then returned, and continued very profuse for several hours before sending for help.	Hand with great difficulty passed by placenta, and feet brought down; placental mass was a great hinderance to descent of the child; hemorrhage continued after the delivery; pains feeble.	Placenta found adherent to almost entire os; it was at length brought away in shreds with considerable difficulty.	With difficulty kept up for 24 hours; "doing as well as can be expected"	Dead before delivery	Placenta had more appearance of mamma or pancreas; highly vascular and organized; nearly the size of 2 hands.
Perfectly well till 2 hours before; when had a "cramp" and hemorrhage, which increased.	Hand passed immediately, on expulsion of the plug; membranes broke; turned, and delivered.	Placenta immediately followed.	Recovered	Not stated	
	Turning.	Perforated.	Recovered	Living	
	Turning.	Perforated.	Recovered	Living	

TABLE I.—*Deaths after*

No.	BY WHOM AND WHERE REPORTED.	AGE.	NO. OF PREGNANCY AND GENERAL HEALTH.	PERIOD OF PREGNANCY.	PARTIAL OR COMPLETE.	STATE OF OS UTERI.	PRESENTATION.	GENERAL CONDITION AT TIME OF DELIVERY.
184	J. H. Davis, in London Lancet, 1845, ii. 123.	35	3d child	8½ month	Complete	Apparently dilated.	Head	Almost pulseless; still bleeding; ergot; pains continued.
185	W. Harding, in London Lancet, 1847, i. 686.			Presumed full	Complete	Size of a half-crown.	Apparently head	Apparently not urgent.
186	A. Martin, Lond. Lancet, 1848, i. 21.				Complete			
187	London Lancet, 1841–42, ii. 642.	36		Full	Complete	Size of a half-crown, and dilatable.	Apparently the head	Spirits good; no distress or syncope; pulse 100, soft; apparently had not been profuse.
188	John J. Jackson, Guy's Hospital Reports, 1847, ii. 256.	39	Delicate; 9th child		A small portion over posterior edge of os	Yielding.	Head	On 22d, excessively low after hemorrhage; pains ceased; allowed to remain to 25th.
189	Drs. Blundell, Ryan, and Austin, in Ryan's Journal, vol. i., 1832.	41	11th pregnancy	7th month	Complete	Os about the size of a shilling; relaxed after.		Seized with fainting; at visit at 8½ A. M., countenance exsanguine, jactitation, pulse small, and repeated syncope; prostration increased after the escape of the waters; condition most alarming.
190	John Ingleby, in Ryan's Journ., vol. i. 1832, p. 479.		Very delicate	Full time	An edge detected quite detached; complete	At 7 A. M., os found lax, equalling half-crown.	Head	At 4 A. M., pains ceased, but flow increased; began to vomit; at 7 A. M., was faint and cold; respiration quick; pulse feeble, and scarce to be counted.
191	W. Bainbridge, London Lancet, 1839–40, ii. 197.			9th month	Complete	When os scarcely at all dilated, plugged and left.		
192	Walter James, Lond. Med. Repository, xxvi. 226.		5th pregnancy; asthmatic	7½ month	Complete	When first seen, just admitted the end of the finger; on second visit, fully dilated.		When called again, 24 hours after, appeared dying; lips and gums pale; pupils much dilated; mind wandering; breathing slow and labored; restless; cold limbs.
193	Dr. Collins, Case 34, p. 54.	40	4th pregnancy	Full time	Found at the os	Size of a half-crown; not very rigid.	Presumed head	Reduced to a state of great debility; a slight pain before the hemorrhage; no chance but in speedy delivery
194	Ibid., Case 89, p. 55.	36	3d pregnancy	Full time	Complete	At close of 2d day, at recurrence of hemorrhage, it equalled a half-crown, and very rigid; 6 hours after, it was "sufficiently dilated."	Head	Bleeding more alarming; no pain.

Deliveries by Turning, &c.

AMOUNT AND DURATION OF HEMORRHAGE BEFORE DELIVERY.	MODE OF DELIVERY.	DISPOSAL OF PLACENTA.	PERIOD OF DEATH.	FATE OF CHILD.	REMARKS.
Large loss.	Placenta perforated; failure at version; hand passed between the placenta and uterus, followed by version.	Withdrawn after the child.	2 weeks, from syncope, after getting up.	Dead	
	Turning.		Died during delivery.	Dead	Cause of death obscure; had previously had a spasmodic pain about the heart.
Flooded during 14 hrs.	Placenta perforated; version.		13 days after, of diarrhœa.	Dead	
Hemorrhage at intervals for 10 days.	Passed the hand by the placenta; ruptured the membranes; turned; uterus acted with considerable power.	Came away directly.	¾ of an hour.	Dead	Uterus contracted well; hemorrhage ceased; promised well; suddenly cried out that she was faint and should die, and sank.
Hemorrhage between 3 and 4 weeks previous; also, 8 days before.	On 25th, sinking without new cause; delivered by turning.	Removed.	Day after delivery.	Dead	Hemorrhage on turning trifling, but depressing; transfusion day after delivery.
Frequent gushes of blood during the week, and slight several times during the month.	Placenta perforated at 8½ A. M., with difficulty, ergot having been given; during perforation, pains commenced; ʒiv blood lost, and hemorrhage ceased; at 2 P. M., transfusion, and at 3½ P. M. had rallied completely; at 4½, ergot, followed by turning, which was done speedily and with ease; ʒij of blood lost.		Very soon after delivery, internal hemor'age came on; transfusion in vain; died at 5 P. M.		
Copious hemorrhage 3 weeks ago; no return till 1 A. M., when flow was very considerable.	At 7 A. M., plug passed in as far as possible between the detached portions and the placenta; in 1 hour, the os dilating; ruptured the membranes; less than a half hour, child born.	Soon expelled.	"In suffering from the effects of loss of blood."	Born alive but not resuscitated	Marks of the several detachments on the placenta.
3 weeks before delivery, had hemorrhage, while drawing water, which continued to her death.			Death.		
For last few weeks, slight loss of blood daily; lost 3 pints on first day; profuse hemorrhage at night; when seen on second day, slight flow.	After giving stimulants, she rallied somewhat; hand passed through the placenta, and feet seized; one pain only and hemorrhage followed; fœtus at once extracted; body brought forth by the forceps, and head was opened.		Died immediately after extraction of child, 30 hrs. from the 1st attack of hemorrhage.		"The pressure of the gravid uterus appeared to act beneficially in compressing the abdominal vessels, and preventing collapse, for immediately on the removal of the child, life began to fail."—*Note.*
"Had been shedding for 5 days before;" 1½ hours after admission, a sudden and most profuse flow.	Hand introduced; the womb contracted strongly and felt well; contracted after delivery.	Came away with child.	Died within 2 hours.	Living	Laceration of the neck anteriorly, and to the right; great debility, and slight hemorrhage at intervals, followed the delivery.
Hemorrhage 2 days before admission; ceased, and no pains; on return, cordials, &c.; waited 6 hours; return of hemorrhage.	Hand passed on 2d, return of bleeding, through the placenta, and version.	Adherent, and brought away almost immediately after.	Uterus contracted well; bleeding continued; died in ½ an hour.	Living	

TABLE I.—*Deaths after Deliveries*

No.	BY WHOM AND WHERE REPORTED.	AGE.	NO. OF PREGNANCY AND GENERAL HEALTH.	PERIOD OF PREGNANCY.	PARTIAL OR COMPLETE.	STATE OF OS UTERI.	PRESENTATION.	GENERAL CONDITION AT TIME OF DELIVERY.
195	Dr. Clarke, Dub. Hospital, in Dr. Collins's work, p. 54.		1st pregnancy					
196	Dr. Robert Lee's Lectures, p. 373, Case 1; Clin. Med., p. 260.	42			Complete	Rigidity of os.		
197	Ibid., No. 2, Clin. Med., p. 261.			9th month	Complete			
198	Ibid., No. 7, Clin. Med., p. 266.			7½ month	Complete	Os hard and undilatable at first; 2 days after, permitted turning.		
199	Ib., No. 12, Clin. Med., p. 271.				Complete	Os considerably dilated, rigid, and unyielding.		Insensible, and cold extremities.
200	Ib., No. 13, Clin. Med., p. 272.		2d pregnancy	8th month	Placenta detached from the os	Rigid and slightly patulous day before delivery.	Head	
201	Ib., No. 14, Clin. Med., p. 274.			7th month	Partial			
202	Ib., No. 15, Clin. Med., p. 276.			7th month	Adherent to posterior part of os	Os wide.		Extremely faint.
203	Ib., No. 16, Clin. Med., p. 277.			8th month	Complete	Rigid at first.		Great exhaustion.
204	Ib., No. 22, Clin. Med., p. 281.			7th month	Complete			Fits of syncope.
205	Ib., No. 23, Clin. Med., p. 282.			8½ month	Complete	Thick and rigid; artificial dilation successful.		
206	Ib., No. 24, Clin. Med., p. 283.			7½ month	Complete	Rigid and undilatable; size of a crown piece.	Head	
207	Ib., No. 25, Clin. Med., p. 285.	33	Distorted pelvis	7th month	Complete	With difficulty introduced hand.		
208	Ib., No. 29, Clin. Med., p. 289.			7th month	Complete	Dilated to size of a crown piece.		Syncope.
209	Ib., No. 35, Clin. Med., p. 295.			9th month	Complete	Size of a half-crown; thin and dilatable.		
211	Guy's Hospital Reports, vi. 80; Dr. Lever.	39	16th confinement					

by Turning, &c.—Continued.

AMOUNT AND DURATION OF HEMORRHAGE BEFORE DELIVERY.	MODE OF DELIVERY.	DISPOSAL OF PLACENTA.	PERIOD OF DEATH.	FATE OF CHILD.	REMARKS.
	"Labor was forced."			Dead	
Profuse 7 days before labor; much blood lost while plugged.	Turning attempted, but failed; plugged for several days; turned at last without much difficulty, followed by exhaustion.		Died after 18 days; inflammation of lungs, pleura, &c.		
Sudden profuse hemorrhage continuing till death, which was sudden.	Died undelivered, before seen by a practitioner.		Died.		
Oozing for 14 days, coming on spontaneously, and no pain; checked for 2 days; sudden profuse return.	Turning easy.		Died in a few days.	Living	
Profuse during 8th month.	Placenta separated by the fingers, and turning.		Died 2 hours after delivery.		Hemorrhage after expulsion of placenta, and sank.
Hemorrhage in 8th month, after great exertion.	On 2d day, membranes ruptured; head descended between placenta and womb.		Died at a remote period.	Dead	Delivery completed without hemorrhage.
Hemorrhage for several days; exhaustion at last after a discharge of blood.	Membranes ruptured; hemorrhage ceased; labor came on in 2 days.		Died on 16th day, from phlebitis and pneumonia.		
Hemorrhage day previous, and returned; ergot had been given repeatedly.	Turning in 5 minutes easy; no hemorrhage followed.	Removed in ½ an hour.	Died on 10th day, from uterine phlebitis.	Dead	
Repeated hemorrhage during 8th month; controlled for some days.	Turning at last; recovered for 2 hours.		Died suddenly, 2 hours after.	Living	
Flooding at intervals for 5 days.	Turning; faintness, cold extremities, and exhaustion; hemorrhage arrested.		Died at a remote period, of phlebitis.		
Three attacks during one month, at long intervals; renewed spontaneously and with great violence.	Two fingers passed between placenta and uterus, and foot brought down; turning with great difficulty; labor completed in half an hour, by artificial dilation.		Died half an hour after delivery, from loss of blood.		Hemorrhage continued in spite of all treatment, and complete exhaustion followed.
Hemorrhage arrested for a time by a cold, and renewed.	The fingers pushed through placenta, and membranes ruptured; head descended, and hemorrhage ceased; labor lasted during the day; exhaustion came on; head perforated; delivery very difficult.		Died soon after delivery from loss of blood.	Dead	Complete exhaustion.
Profuse at 5½ month, and repeated at 7th month, lasting 3 days.	Hand thrust through placenta; delivered by turning; head removed with great difficulty.		Died 1½ hour after delivery.		Exhaustion from time of delivery; laceration of cervix.
Two attacks of flooding in the 7th month, at intervals of 3 weeks.	Turning in 15 minutes, without much difficulty.		Died 4 hours after delivery.		Convulsions came on during extraction of child, lasting till death.
Flowing at beginning of 8th month, very severe at end of a month.	Turning easy; syncope followed; she never rallied.		Died 4 hours after delivery.	Living	
Previously had two severe losses of blood, and no help.	Turning.		Died immediately after delivery.		

TABLE I.—*Deaths after Deliveries*

NO.	BY WHOM AND WHERE REPORTED.	AGE.	NO. OF PREGNANCY AND GENERAL HEALTH.	PERIOD OF PREGNANCY.	PARTIAL OR COMPLETE.	STATE OF OS UTERI.	PRESENTATION.	GENERAL CONDITION AT TIME OF DELIVERY.
212	Monthly Journ., August, 1852, p. 171; Dr. A. Thompson Lowne and Dr. Gordon.	31	Able bodied; 3 miscarriages; then 1 child		Complete	Os open half an inch, and rather rigid; ergot given; os began to dilate; 4 hrs. after, it admitted the hand; os dilatable.		Had bled very profusely; great anxiety and alarm, and some tendency to syncope; symptoms now demanded delivery.
213	Mr. Griffin, from British Record, 1848, p. 108, in Braithwaite, xvii. 295.							When first seen, was in a state of great prostration; was plugged; in 35 hours plug removed.
214	Smellie, vol. iii., collection 38, No. 2, Case 3.		Multipara		Complete	Os largely open.	Head	Excessively weak and low; fainting; cold extremities.
215	Ibid., Case 8.				Complete	Os largely open.		To all appearance, dying.
216	Smellie's Cases, vol. iii., collect. 33, No. 2, Case 16, p. 152.		6th child	8th month		Os lax; equalled half a crown.		Excessively weak, faint, and low.
217	Dr. W. C. Roberts, in Amer. Journ. Medical Sci., vi. 534.	26	Delicate; 2d pregnancy	8th month		When os equalled 2 shilling piece; membrane ruptured; dilated with some difficulty.	Head	When called, pulse full; no exhaustion until toward expiration of 48 hours; then exhaustion came on rapidly.
218	Ibid., New York Annalist.	26		8th month	Complete	Os at first equalled 2 shilling piece; became thinner and dilatable after plugging.	Head	She fainted, and, after it, pulse not weak, but remarkably quick and frequent; on return of bleeding great agitation.
219	Dr. Burwell, in Amer. Journal Med. Sciences. July, 1846, p. 144.	21	3d labor	Full time	Three-fourths or four-fifths over os	One and a half to two inches, and yielding.	Head	When seen, was without pain (pains had come on night before); pale, waxen look; skin covered with cold sweat, increasing to drops during turn of faintness; pulse 150, very soft; appearance languid and abandoned; had indistinct vision.
220	Rigby's Essays, Case 7.					Os open.		Was greatly sunk, and seemed almost dying.

by Turning, &c.—Continued.

AMOUNT AND DURATION OF HEMORRHAGE BEFORE DELIVERY.	MODE OF DELIVERY.	DISPOSAL OF PLACENTA.	PERIOD OF DEATH.	FATE OF CHILD.	REMARKS.
Had been in great excitement from her husband's conduct, and, during a fit of coughing, had profuse hemorrhage; was very profuse; checked, and returned in 2 weeks slightly, and continued more or less for 5 days.	Turning, not without considerable force; "os did not offer any considerable resistance."	Extracted.	Died on 7th day.	Dead	Much exhausted by delivery.
After having had slight pains for 3 hours, suddenly lost a pint and a half; bleeding ceased after plugging.	Descended spontaneously, after removal of the plug.	Pains feeble; ergot given; uterus relaxed and dilated, but no bleeding; hand passed in; placenta was half detached; the rest separated.	Died in 15 d'ys, of irritative fever, apparently from absorption of putrid matter.	Had been dead some time; was putrid	The detached part of the placenta was covered with coagulated blood firmly adhering.
Had had a small degree of flooding for several days, but, for some hours, it had been violent; had had some pains, which had left for 2 hours.	Passed the hand between the os and placenta; membranes ruptured, and leg seized; delivered with ease.	Secundines followed.	Rallied after delivery but sank in an hour.	Dead	The detached part of the placenta was dark livid, the rest fresh; flooding "abated" after delivery: neglect of her physician, who mistook the placenta for a coagulum.
On commencement of labor, had slight flooding, which had gradually increased during 24 hours.	Could not perforate the membranes; *pierced the placenta*, and turned.		She died in a few minutes.	Living	Flooding stopped in delivery of the child.
Subject to floodings for 2 months.	Dilated the os; tore the membranes, turned, and delivered.	Separated it with some difficulty from its adhesions.	4th day after delivery.	Dead several days	No sensible flooding after delivery.
Flooding came on while making violent exertion, and had lost a chamber full; one week after, profuse hemorrhage again, and continued at intervals till membranes ruptured.	About 48 hours after called, the membranes were ruptured: in a few hours ergot, followed in 6 hours by turning; os dilated with some difficulty, and placenta perforated.		Died 10 minutes after delivery.	Dead many hours	A gallon of blood was lost from first to last, and no fainting till towards the close of life.
First hemorrhage at 7th month, and repeated till 8th, when, while evacuating the bowels, there was a gush, and 2 quarts lost.	Plugged at first; a few slight pains followed during the night; bleeding came on by daylight; saturated the tampon, and ran down the limbs; hemorrhage became abundant; placenta perforated, and child turned.	Uterus stimulated by hand, and placenta expelled.	Died of peritonitis on 3d day.	Died during delivery	No syncope followed delivery, and no blood of any consequence: he thinks, from the pulse, that peritonitis might have begun before delivery.
Very profuse flooding, 4 or 5 weeks before; lost several quarts; 2 days previous to labor, it came on freely.	Coagula in vagina; little hemorrhage; membranes ruptured by finger, and 2 or 3 slight pains came on; fainted during one; head distorted os; ergot, brandy, &c.; died undelivered.		Died 5 hours after rupture of membranes; pains came on at night; died next afternoon.	Removed 4 hours after death	Not more than 3 or 4 ounces lost from rupture of membranes till death; on *post-mortem* examination, body entirely blanched; not the least red tissue in uterus.
Had been flooding many hours, and lost an immense quantity of blood.	Turned easily at once, but delivery of head greatly retarded.		Died next day.	Putrid	Pelvis narrow and distorted; head perforated, and delivery very difficult.

TABLE I.—*Deaths after Deliveries*

NO.	BY WHOM AND WHERE REPORTED.	AGE.	NO. OF PREGNANCY AND GENERAL HEALTH.	PERIOD OF PREGNANCY.	PARTIAL OR COMPLETE.	STATE OF OS UTERI.	PRESENTATION.	GENERAL CONDITION AT TIME OF DELIVERY.
221	Rigby's Essays, Case 10.			Last month	Complete	Very little open, and the placenta could not be felt.	Breech	
222	Ibid., Case 14.		4th pregnancy; florid and healthy appearance	Full time	Complete	Uterus, when seen, very little open.	Head	Was almost pulseless; "most threatening appearance;" pain abated.
223	Ibid., Case 15.				Complete	Shut, but loose and relaxed.		Seemed to be dying.
224	Ibid., Case 47.			Full time	Complete	Admitted the hand.	Presumed head	"Faint to an extreme."
225	Ibid., Case 58.			Beginning of 9th month	"At the os"	Perfectly loose and yielding.		Very much reduced by loss of blood.
226	Ibid., Case 81.				"Presenting"	"Os perfectly loose."		When surgeon sent for, she was reduced to last extremity.
227	Ibid., Case 82.	42	Very weak, and ill of malignant fever over a week	8th month	"At the os"	Loose and dilatable.	Apparently head	
228	Ibid., Case 89.		Very weak and delicate; feeble health from frequent sickness; multipara.		Fixed to the os		Apparently head	Feared very much the event.
229	Ibid., Case 98.		A wretched, destitute, neglected pauper	Full time	"Attached to mouth"	Perfectly lax.		In a dying state when seen.
230	Madame Lachapelle, tome ii. p. 415.	26	2d pregnancy; emaciated and feeble; had had violent angina, and symptoms of pneumonia, for which bled and leeched	7th to 8th month	Partial; detected on admission	At first, rigid; dilated on 16th slowly.	Head	
231	Ibid., p. 419.	27	1st pregnancy	7th month	Inserted over the orifice; complete			

by Turning, &c.—Continued.

AMOUNT AND DURATION OF HEMORRHAGE BEFORE DELIVERY.	MODE OF DELIVERY.	DISPOSAL OF PLACENTA.	PERIOD OF DEATH.	FATE OF CHILD.	REMARKS.
Duration of flooding about 2 hours; died before aid could reach her.	Died undelivered.				After death, placenta found separated a space not bigger than a crown piece.
At noon, some pain and slight flooding; in evening, sudden profuse hemorrhage, and lost an astonishing quantity of blood.	Dilated first with one finger; perforated placenta, and delivered easily by the feet.		Died 6 hours after, from exhaustion.	Not stated	
Small hemorrhage 24 hours before was seen by physician; "now increased to a most violent degree suddenly; reduced in a short time to the deplorable state.	Dilated easily and turned readily, passing the hand by the placenta.		Half an hour after delivery.		Here the attendant sent for him, after this profuse hemorrhage came on, instead of delivering at once. Up to this time, Rigby was not aware of the necessity of knowing the position of the placenta.
Had been several hours flooding considerably.	Delivered at once with ease.	Placenta adherent to the cervix; could not be removed for 1½ hrs.	Died 12 hours after.	Not stated	Discharge was kept up by attempts to separate the placenta; he thinks the result due to it.
Hemorrhage accompanying labor had been excessive.	Delivered fœtus and placenta with little difficulty.	Withdrawn.	Fever set in on 3d or 4th day, and died in a few days.	Not stated	Was better after delivery, and had but little flow after it.
Repeated floodings during several weeks, and much blood lost at each.	Turning perfectly easy.		Died in a half hour after turning.	Not stated	She had lost an excessive quantity.
A few hours before labor, pains came on, with bleeding—which increased.	Turned at once with ease.	"Came away very easily."	Died of the fever.	Not stated	Whole loss not serious to one in health.
Labor began with great flooding; not called till lost a great deal of blood.	Turned at once with ease.		Did well till 3d day, when a fever set in, and she soon died.	Living	
Had been in labor with flooding; unattended for a day or two.	Delivered with perfect ease.		Died in 2 hours after delivery.	Dead	
Had hemorrhage and pain on admission, on 11th; on 16th, it increased, and edge of placenta descended; tampon applied.	Spontaneous expulsion took place on 20th, and she was in a satisfactory state for an hour.		Soon after delivery, hemorrhage returned, and she died 2½ hours after delivery.	Dead	The child was plethoric; mother anæmic; hence, no anastomosis between them; but it died asphyxiated.
Hemorrhage came on; its source recognized; tampon applied; it remained in 3 days; no suffering; fever, &c.	Then pains came on gradually, and, in 20 hours, child and placenta expelled; putrid.		For 1½ hour most satisfactory; then chills came on; dyspnœa; suffocation, and died 2 hours after delivery.	Putrid	Next day, the odor was offensive; cavities filled with putrid gas; uterus and parenchymatous organs infiltrated; right lung adhered to pleura; left pleural cavity filled with serum and lymph; this pleuritis seemed due (she thinks) to reaction succeeding lypothymia, caused by hemorrhage; or was it a spasmodic hypothymia?

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232	Madame Lachapelle, tome ii. p. 422.	25	Large and robust; 2d pregnancy	8th month	Partial	Completely open.	Head	On 7th, pains came on.
233	Ibid., p. 425.	24	6th pregnancy	7th month	Partial	On 11th, rigid and little open.	Head	On 14th, strong pains came on; hemorrhage continuing; os undilating; tampon imperfectly applied; this failing, membranes ruptured.
234	Ibid., p. 435.	34	Large and strong; 2d pregnancy	8th month				On 28th and 29th, violent chills; tenderness of abdomen on pressure; high fever; also, pain in side of thorax (blister); labor pains; delirium, with pain in abdomen.
235	Ibid., p. 438.	25	Strong constitution	9th month	Complete	Admitted the hand.	Feet	
236	Ibid., p. 441.	21	Good constitution; sanguine temperament; 1st pregnancy	7½ month	Complete	At the end of 9 days, on admission, neither dilated nor relaxed; at last, after repeated syncopes, it was dilated.	Head	She was reduced to the last degree of feebleness; thus watched for 9 hours.
237	Ibid., p. 445.		Epileptic; had been bled 5 or 6 times during pregnancy for plethora; 2d pregnancy	Beginning of 9th month	Partial	Not dilatable until 12th	Head	On 12th, blood flowed in abundance.
238	Ibid., p. 454.	41	Feeble; lymphatic; 4th pregnancy	End of 8½ month	Partial	6 to 8 lines when membranes ruptured.	Head	Vomiting returned after rupture of membranes, and pains became stronger.
239	Ibid., p. 457.	31	Feeble; ordinary good health; 2d pregnancy	Beginning of 8th month	Complete	On admission, open, but of some length; 24 hours after tampon, it was dilated.	Head	24 hours after tampon, it came on; abundant after removing it for examination.
240	Dr. D. H. Storer, communicated by.		1st child					
241	Dr. L. Shanks, of Memphis, Tenn., communicated by.	20		Full time	Complete	When first seen, a little dilated; os next day dilated.		Fainted, fell, and hemorrhage abated; the next day, pains came on, and increased flooding; great exhaustion.

by Turning, &c.—Continued.

AMOUNT AND DURATION OF HEMORRHAGE BEFORE DELIVERY.	MODE OF DELIVERY.	DISPOSAL OF PLACENTA.	PERIOD OF DEATH.	FATE OF CHILD.	REMARKS.
Had occasional hemorrhage from 5th to 8th month; at this time, tampon required on 4th; bleeding suppressed on 6th; headache and thirst; feverish; v. s. 6 oz.; bleeding returned, and again tampon.	Separated the placenta, and delivered easily by turning; she was pale and feeble, and fainting ensued, but bleeding ceased.		On 9th, *coma* came on, after excitement; she died before night.	Dead; "full of blood"	Arachnitis over cerebellum, and effusion into ventricles; both ovaries suppurated, and almost destroyed; renewal of hemorrhage on 6th; accompanied the febrile attack, and caused by it. What caused the apoplexy and ovaritis? Reaction?
Suffered a very considerable loss of blood, and, after some days, recurred to an alarming degree; on 11th, tampon; this expelled on 13th, and reapplied.	Bleeding suppressed by evacuating waters, but cord came down, and she was easily delivered by turning.		The same day, violent fever set in, and died on 17th, of adynamia, or putrid fever.	Alive	Lochia continued; she thinks the fever due to reaction following depression.
A frightful hemorrhage before admission on 27th; tampon, and bleeding returned on its withdrawal; reintroduced.	On 30th, child expelled; putrid; womb distended by gas; bleeding for some time after delivery.		Died 2 hours after delivery.	Putrid	Pleuritis and peritonitis.
Had lost a great deal of blood during 6 weeks.	Passed the hand at once by the placenta; seized the feet with ease.	After delivery, did not lose a drop.	She grew pale; had spasmodic chills; died in ½ of an hour after delivery.	Dead	Heart black and softened; uterus soft and flabby; blood not gone from fœtus; in these cases, it never is; versus those who believe in immediate connection of two (p. 440).
Almost uninterrupted hemorrhage during 9 days; some pains on admission; tampon; hemorrhage arrested; returned during vomiting.	Placenta detached, and delivered by turning; simple and easy; there was much blood escaped.		Adynamic fever carried her off on 5th day.	Dead	Serum in cavities; uterine phlebitis; ovaries enlarged.
On 10th, abundant hemorrhage after admission; tampon; it caused pains slightly.	Turned, and brought down feet very slowly to dilate the os; after feet were brought down, severe convulsions.	Os distended, but not torn; bleeding continued during and after delivery; placenta adherent, and required to be removed.	Died on 16th day.	Living	Bleeding continued after delivery of placenta; succession of faintings; womb relaxed at intervals; vagina full of clots; cervix soft and open during life; tampon caused the labor; *post mortem* on next day; putrefaction.
Some hemorrhage Apr. 1; on 3d, pains came on; on 4th, a clot, followed by fluid blood.	Membranes now ruptured, and bleeding at once stopped; child expelled spontaneously; labor lasted 20 hours.	Was as comfortable as usual 5 hours after.	Respiration became embarrassed; extreme depression; died 13 hours after delivery.	Dead	Her chill before labor, vomiting, and pain in abdomen before death, were spasmodic; there was no inflammation; fœtus as in other cases.
Considerable hemorrhage came on at date, which enfeebled her; for a week, there was but little, and it then returned; tampon; this arrested bleeding, and pains came on.	Delivered, when os found dilated, by turning; bleeding continued during delivery, and afterwards.		Died 19 days after.	Living	Pleuro-pneumonia, which she thinks due to reaction from extreme collapse.
Bleeding profuse.	Turning well done.		Died suddenly, an hour after delivery.	Died	
Slight hemorrhage several weeks before, while walking across the room; lost more than a half gallon of blood next day.	Passed hand by placenta and turned.	Placenta delivered after child.	Died in 6 hrs., from exhaustion.	Dead	

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242	Dr. Willard Parker, N. York, communicated by.	45	Multipara		Half-way over the mouth			Pulseless.
243	Dr. Richard H. Thomas, Baltimore, communicated by.	25	Stout; 2d child		Complete	Os rigid at first, and resistant.		
244	Ibid.	40	Mother of 7 or 8		Complete			Very prostrate.
245	Ibid., occurring to his brother.							
246	Mauriceau, according to a table of Dr. Rob't Lee's, in Lancet, 1847, ii. 439; Case 170; Ann. 1676.			7th month		Os hard, thick, and little dilated.		
247	Ibid., Case 438; Ann. 1686.					Thick and hard.		Flooding and convulsions.
248	Ibid., Case 484; Ann. 1687.			8½ month	Entirely detached			Great hemorrhage.
249	Portal, according to Dr. Lee, in London Lancet, 1847, ii. 548; Case 39; Ann. 1671.				Complete			
250	Dr. Barnes, Lancet, 1847, i. 328; Case 3.	41	12th pregnancy; stout and well developed		Complete	Os found dilated after death.	Head	
251	Mr. Newnham, London Med. Gaz., Nov. 1845, pp. 125–27.		Very poor, and very wretched					

by Turning, &c.—Continued.

AMOUNT AND DURATION OF HEMORRHAGE BEFORE DELIVERY.	MODE OF DELIVERY.	DISPOSAL OF PLACENTA.	PERIOD OF DEATH.	FATE OF CHILD.	REMARKS.
	Stimulants given, and child expelled.	Placenta was firmly adherent; attempt to separate it; bleeding continued.	Died in 1 hour.		Placenta full of cretaceous masses, and hard.
Had lost a very large amount, and was bleeding profusely; tampon half hour.	On removing tampon, passed by placenta; turned, and delivered the hips; rest expelled; placenta followed.		Sank gradually, and died in 8 hours.	Child dead	Hemorrhage ceased on delivery.
Bleeding at intervals for 24 hours.	Attempts had been made to turn; gave stimulants; passed the hand by the placenta, and got the feet; delivery assisted by strong expulsive pains.		Died in 5 minutes after delivery.	Dead	
			Died.	Saved	
	Refused to be delivered.		Died undelivered.		
	Delivered.		Died 2 hrs. after delivery.		
	Turning.		Died in 12 days after delivery.		
Great hemorrhage for 19 days; increased during preceding 24 hours.	Would not consent to delivery when first visited; was delivered while unconscious.		Died soon.		Rallied after delivery, but sank.
Pains came on at 7 P. M. of 13th; flooding at intervals in night; died at 5.48 A. M.	Died undelivered.		Died in less than 11 hours after first of labor.	Dead	Placenta spread over ⅔ the area of the uterus.
Had suffered very much from hemorrhage.	Turning, as a forlorn hope.		Died 2 hours after turning.		

Table I.

Mode of Delivery—(not including cases of Artificial Separation, or Spontaneous Expulsion of the Placenta, of Tables II. and III.).

There were 200 cases of *turning.*
" " 141 recovered.
" " 59 died, or *one in three and four-tenths.*

The average mortality of cases of turning,* according to Prof. Simpson, *Lond. Lancet*, 1847, vol. ii. p. 381, is *one in two and nine-tenths.*

There were 50 cases of *spontaneous delivery.*
" " 43 recovered.
" " 7 died, or *one in seven and one-seventh.*
" " 12 cases delivered by *craniotomy.*
" " 11 recovered, cases 6, 7, 12, 17, 37, 38, 39, 57, 59, 180, and one of Dr. Lever's.
Died, case 206.

There were four delivered by *forceps;* all recovered. Cases 5, 99, 123, 124.

In Cases 10, 11, 195, delivery was "forced;" the first two recovered; the last died.

In Cases 101, 113, the fœtus was grasped and brought down; both recovered.

In four, the mode of delivery not stated; two recovered, and two died. In Cases 9 and 152, the breech was brought down. In Cases 197, 219, 221, 245, 250, the patients died undelivered.

Of a total of 236 delivered by artificial aid, 172 were saved, and 64 lost, or about one in three and seven-tenths ($3\frac{7}{10}$).

Under the head of spontaneous deliveries, are included several in which ergot was given, and others in which the membranes had been ruptured or the tampon employed.

Those delivered without manual aid (in extraction) seem to have been of a less severe character than the other class. The hemorrhage, previous to delivery, was less severe in the cases, as a whole, in which delivery was effected by the expulsive powers of the womb, than in cases that were assisted by art.

* We adopt Dr. Simpson's statement, for purposes of comparison in this paper, because based upon a much larger number of cases (421).

Degree of Hemorrhage in different classes of Cases.

Among *recoveries* after *turning*, *craniotomy*, &c., the hemorrhage, previous to delivery, was so severe as to render the danger very threatening in . . . . . 84 cases.
It was "considerable" in . . . . 18 "
" "moderate" in . . . . 12 "

In sixty-two of the eighty-four, the constitutional symptoms are stated as indicating great danger to life.

Among *deaths* after *turning*, *craniotomy*, &c., the hemorrhage, previous to delivery, was noted as

Very urgent in . . . . 44 cases.
"Moderate" " . . . . 3 "
"Considerable" in . . . . 1 "

Of the forty-four, in thirty-four the depression was expressly noted as extreme. Of the three in which hemorrhage was "moderate," Case 187 died very unexpectedly; Case 227 was very weak and delicate, and died of fever; and Case 202 was one of partial presentation, and died at a remote period.

In Cases 192, 210, 215, 223, 226, 229, 244, the patients were apparently *in articulo mortis* at the time of delivery, and in 193, 203, 242, 251, they were apparently far advanced toward a fatal termination. It may be thought by some that such cases should be rejected in a consideration of different modes of treatment, as they all proved fatal; but a reference to Cases 13, 37, 38, 58, 60, 61, 69, 83, 90, 106, 108, 138, 143, 145, 165, 181, in which the patients recovered from a state of extreme depression, and some of whom appeared to be dying at the time of delivery, will, we think, satisfy such that the cases referred to should be retained.

Among *recoveries* after *spontaneous delivery*, the hemorrhage had been very great in . . . . . 16 cases.
"Considerable" in . . . . 6 "
"Moderate" in . . . . 4 "

Among *fatal cases* after *spontaneous delivery*, in Cases 201, 213, 231, 238, 242, the bleeding was very severe. In Cases 200, 230, it was apparently moderate.

If now, we compare the 84 in which the hemorrhage was "very severe," among the *recoveries* after artificial delivery, with the 12 in which it was "moderate," we find the cases of "moderate" bear to those of profuse hemorrhage the proportion of 1 in 8 of the whole.

Among the *fatal* cases after artificial delivery, the proportion of

moderate to severe hemorrhage is 3 in 47, or about 1 moderate in 16 severe.

Comparing the 16 *recoveries* after *spontaneous delivery*, in which the hemorrhage had been severe, with the four in which it had been moderate, the proportion of the latter to the former is 1 in 5 of the whole.

If we add to each group of "severe" cases, in both recoveries and deaths, those in which the hemorrhage was noted as "considerable," we get 147 compared with 15, or *one* moderate in *a little less than eleven of the whole*, in cases requiring artificial delivery; and 27 compared with 6, or *one* moderate in *five and a half* of the whole, delivered by the unaided efforts of nature. So that in either case, there is a decidedly larger proportion of mild cases among those delivered by the natural effort.

Degree of Placental Presentation in different Classes.

Among the *recoveries* after *spontaneous expulsion* of the child, we have 20 cases of *partial* presentation of the placenta, viz: Cases 4, 23, 26, 32, 36, 44, 45, 46, 55, 62, 94, 95, 102, 110, 118, 119, 159, 171, and two of Dr. Lever's; and 10 cases of *complete* presentation, viz: Cases 52, 56, 70, 84, 114, 140, 169, 170, 173, 174, or 66 per cent. *partial.*

Of the *fatal* cases of spontaneous delivery, there was

1 case *complete*,
*4 cases *partial*, or 80 per cent. *partial.*

Of the remaining cases, being *recoveries* after *artificial delivery*, there were

46 cases of *partial*,
and 84 " *complete*, or 35 per cent. *partial.*

While of *fatal* cases after *artificial delivery*, there were

12 cases *partial*,
45 " *complete*, or 60 per cent. *partial.*

These figures show that among cases of spontaneous expulsion of the child, there was a much larger proportion of *partial* presentations than among the remaining cases, and as a consequence less serious hemorrhage, and therefore a lower rate of mortality; and not, as at first sight appears, that cases let alone are better situated for a favorable termination. This affords an illustration of the need

* Of these four cases, Case 201 died on the fifteenth day of pneumonia and phlebitis; Case 220 died of hemorrhage after delivery; Case 238 ceased to bleed after rupture of the membranes; Case 242 was moribund when visited.

of a critical analysis of cases, when we seek to learn their bearings upon different modes of treatment.

Date of Death after Spontaneous and Artificial Deliveries.

1 hour and under.	3 hours and under.	6 hours and under.	12 hours and under.	24 hours and under.	
Case 185*	Case 193, p.	Case 208, m.	Case 224, p.	Case 188, p.	Case 249, p.; died soon.
" 187, m.	" 194, p.	" 209, p.	" 238, p.	" 220, p.	" 198, p.; in few days; exhaustion.
" 189, p.	" 199, p.	" 222, p.	" 243, p.		" 248, p.; 12 days; diarrhœa.
" 192, p.	" 203, p.	" 241, p.	1 complete in 7 hours.		" 184, p.; 2 weeks.
" 205, p.	" 226, p.				" 186, c.; 13 days; diarrhœa.
" 206, p.	" 229, p.				" 196, p.; 18 days.
" 207, p.	" 230, p.				" 200,† remote.
" 210, p.	" 231, p.				" 201, p.; 16 days; phlebitis.
" 211, p.	" 234, p.				" 202, p.; 10 days; phlebitis.
" 214, p.	" 247, p.				" 204, p.; remote; "
" 215, p.	" 251, p.				" 212, p.; 7th day.
" 217, p.	1 complete.				" 213, p.; 15 days; irritative fever.
" 223, p.					" 216, p.; 4th day.
" 235, p.					" 218, p.; 3d day; peritonitis.
" 240, p.					" 225, p.; few days; fever.
" 242, p.					" 227, p.; fever.
" 244, p.					" 228, p.; "
1 partial.					" 232,† 9th day; apoplexy; ovaritis, &c.
1 partial.					" 233, p.; 7th day; fever.
					" 236, p.; 5th day; "
					" 237, p.; 16th day.
					" 239,† 19th day; pneumonia.
					1 complete; 10th day; from exposure.
					1 partial; 5th day; peritonitis.
					1 " 9th day; phlebitis.
19	12	4	4	2	

* The letters following the numbers indicate the degree of hemorrhage prior to death. p. For profuse. c. For considerable. m. For moderate. † Apparently not urgent.

Of the cases in which death did not occur as an immediate consequence of loss of blood, it is impossible to say in what proportion this result was directly caused by the hemorrhage. It is doubtless a mistake to attribute the fatal result in the most of such cases, to accidental causes unconnected with the delivery. Mad. Lachapelle inquires, in regard to the inflammatory symptoms that arose in several of the cases under her care, if these were not caused by the reaction from the excessive depression into which they had sunk.

Condition of Os Uteri at time of Delivery.

Among the *recoveries*, in 22 the os was fully dilated.
" " " " 72 partially so, but yielding.
" " " " 19 " dilated, but rigid and unyielding.
" " " " 4 " " condition not stated.

Of the 22 *fully dilated*, 12 were delivered by *turning*.
" " " 8 " " " spontaneous expulsion.
" " " 1 " " " forceps.

In Case 101, the fœtus and secundines were grasped and brought down.

Of the 71 *partial* and *yielding*, 60 were delivered by turning.
" " " " 7 by spontaneous expulsion.
" " " " 3 " forceps.

In Case 113, the head was brought down by the hand.

Of the 19 in which the os was *partially dilated* and *rigid*,
6 were delivered by craniotomy.
13 " " " turning.

The four in which the os was partially dilated, but the condition not stated, were delivered by *turning*.

Of the *fatal cases*, in 17 the os was fully dilated.
" " " 13 partially dilated and yielding.
" " " 9 " " " rigid.

Of the 17 *fully dilated*, 16 were delivered by turning.
" " " 1 was " spontaneous expulsion.

Of 13 *partially dilated* and *yielding*,
12 were delivered by turning.
1 was " spontaneous expulsion.

Of 9 *partially dilated* and *rigid*,
1 was delivered by perforation.
7 were " turning.
1 was "forced."

A comparison of the 17 fatal cases, with the 22 recoveries, when the *os is fully dilated*, exhibits the evil effects of delaying delivery too long, or until the womb has become fully dilated. Of the 17 fatal cases, it will be observed that turning was performed in 16, and in one there was natural delivery; of the 22 that recovered, 8 were spontaneously expelled, and 14 delivered by manual aid. Now the total deaths in Table I. are few, compared with the total recoveries, while the deaths with a fully dilated os outnumber the recoveries with the same condition of the os; throwing out the spontaneous deliveries in each, which, we have already seen, bear a larger proportion among recoveries, and for reasons which we have shown. In other words, of cases of complete placental presentation allowed to remain undelivered until the os uteri is fully dilated, more will die than recover, though of cases delivered at a proper time, the reverse is true; for of the *eight* cases of *spontaneous expulsion* with a *fully dilated os*, that recovered, *six*, viz: Cases 26, 110, 118, 149, 152, 171, were noted as *partial* presentations. Case 164 was apparently partial, and Case 170, though noted as complete, was of a mild character, there being no constitutional symptoms indicating great loss of blood.

The importance of delivery in placental presentations, so soon as the state of the os uteri will permit of the introduction of the hand, cannot be too strongly urged. That eminent practitioner, Dr. Valentine Mott, in a communication with which he has favored us, says: "I have seen, and been engaged in a number of cases of placenta prævia in the course of my long practice. In every case in which there was interference at a sufficiently early period, the mother has been always saved, and, with few exceptions, the child also.

"It is impossible for any one but an experienced practitioner, to know at what time we are to interfere. General directions can be given, as in cases of hernia, but they must be seen to be judged of correctly. Most of the cases fatal to the mother arise from not being seen soon enough, or delay on the part of the practitioner. I have known a number of instances in which both mother and child have been lost from delay; and quite lately, a case occurred in this city, in which both mother and child were lost. The practitioner was urged by two others not to put off the delivery, but he did until the mother was too far exhausted. My plan has been to pass the hand by the side of the placenta rather than go through it."

Dr. D. Brainard, of Chicago, writes us: "I remember several cases of placental presentation, at least where the edge was felt, but none where the centre presented. I have never used Prof. Simpson's method, but adhere to the old practice, and have had no death occur from hemorrhage, although I have known one to occur in the practice of a neighbor. I saw the case, and believe death to have occurred from leaving it too long before inducing labor."

These views are abundantly sustained by the cases we have presented. It might be invidious to point them out individually, but there are several here recorded, in which it is painfully evident that the patient was suffered to perish from unnecessary delay on the part of the medical attendant, the os uteri being *dilatable*, but not largely dilated.

The patient's prospects of recovery are materially affected by the condition of the os uteri during delivery; and its imperfect dilatation under certain circumstances, is the chief condition for which the artificial separation of the placenta has been recommended in place of delivery by forced dilatation. It would seem that we might safely assume, that delivery effected by a forcible dilatation of a rigid and unyielding os uteri, must expose a patient to greatly increased risks. There is no branch of the subject involved in so much difficulty as the proper mode of procedure in

such cases. The rule to deliver as soon as the os will permit, is well established; but in some cases, as will be seen by a reference to the table, most alarming hemorrhage has come on when the os has been even apparently closed, or just admitted the tip of the forefinger, the placenta completely covering the internal surface of the lower segment of the womb. In other cases, the cervix is found thick, rigid, and undilatable, but partially open, and the blood streaming forth in rapid flow. The practice, in these cases, has been to dilate the cervix by a gradual but forcible introduction of the hand, and removal of the child. The difficulties attending such a procedure must be evident enough from reading the details of some of the cases delivered in this manner; and one cannot leave the perusal of their histories without increased admiration of the recuperative powers of Nature which alone could sustain a patient under so great an accumulation of evils.

Dr. Rigby, in his *Essay*, pp. 38, 40, 47, urges the necessity of waiting until the uterus is in a state *capable* of *dilatation*, not waiting, however, for its actual open condition; and thus in Cases 83 and 89, though the os was apparently closed, or nearly so, he effected delivery with safety, because the os was dilatable. He had seen in the practice of others, the evil effects of undertaking the operation before the parts should be prepared: and even if contractions of the neck come on during delivery, opposing an obstacle to the mechanical dilatation, he advises the practitioner to wait "until the parts become relaxed by pains or discharges" (p. 41), watching the patient continually.

Dr. Lee, in his *Lectures*, p. 373, says: "There is not unfrequently most profuse and alarming flooding from complete presentation, where the os uteri is so thick, rigid, and undilatable, that it is impossible to introduce the hand into the uterus without producing certain mischief. In 13 out of the 36 cases contained in the following table, the os uteri was rigid and undilatable. The tampon, or plug, has no power to restrain the hemorrhage in such cases, nor do I know of any other means—either cold, quietness, or opium—which effectually have; and it is sometimes absolutely necessary, under such circumstances, to deliver by turning, before the hand can possibly be introduced into the uterus without producing fatal contusion, or laceration of the parts."

Dr. Dewees, in the journal referred to, directs when the os is little open and rigid, to use the tampon. The forced dilatation of the os, he characterizes as an "outrageous practice;" and he says,

"it must not, therefore, be thought of, however high the authority may be that recommends it." "The indications," he says, "as far as we have witnessed for the last 30 years, are readily met by the use of the tampon and other auxiliary remedies." "It is true Gardien thinks the plug will do harm by exciting the uterus, and thus increasing the separation of the placenta; but this is theory; it is not consonant with experience." He recommends a similar practice when the os uteri is partially dilated and rigid.

Dr. Collins's cases, 34, which died, and 50, which recovered, are instances of the difficulties and dangers of forced delivery; and Dr. Collins, at p. 53, Amer. edit., refers to Ramsbotham's cases, 139, 140, 141, 142, 144, 145, 149, as further illustrations of the evils attending it.

Dr. W. H. Crowfoot, in some very judicious remarks in the *Prov. Med. and Surg. Journ.*, 1845, p. 674, says: "Of the 14 cases of complete placental presentation, to which I have been called, in my own private practice, or in consultation with other practitioners, 11 were delivered by turning, as soon as the os uteri had become dilated to the size of a shilling, and was found dilatable. Of these 11 cases, not one mother was lost. The 12th was early delivered by a very careful and experienced practitioner, but the mother subsequently died of hysteritis. The 13th and 14th I did not see till the labors were far advanced, and the patients almost exsanguined: both were delivered; both, with the child, perished." He insists that the safety of the patient depends, in a great measure, on the very gentle and gradual manner in which the operation is performed, particularly the first steps of it. If the practitioner go to work slowly, he will succeed; if under the influence of alarm, or of an undue haste to get over a troublesome case, he should use undue violence, the consequences will be disastrous.

Dr. Ashwell, in *Lond. Med. Gaz.*, 1845, p. 1197, in opposing the plan of treatment recommended by Dr. Simpson, asks if the placenta can be separated from the "developed, and highly vascular cervix," without risk, why may not one finger, used as a dilator, make way for the introduction of a second, and a third, and eventually of the whole hand, for the purposes of turning? "I have often commenced the process of dilatation when the ring of the os uteri has seemed as hard and as rigid as cartilage, and yet, in no instance, have I failed, and generally, in a moderate time, to accomplish a full and safe dilatation, thus affording to the child at least, and, as I think, to the mother also, a higher chance of life, and greater immunity from danger."

But "Mauriceau remarked," says Perfect, "that when the orifice of the womb was soft, and thin, and equal, the patient generally recovered; but if the contrary, she often died." This was in cases at the sixth and seventh month. "Peu is of the same opinion, and pronounces death, from his own experience, when violent force is in such cases employed to dilate the os uteri."

Naegelé mentions cases of placenta prævia in which the child was turned and delivered with perfect safety, but a constant dribbling of blood persisted after labor, resisting all efforts to check it, and on *post-mortem* examination, "he invariably found the os uteri more or less torn." (See *Dr. Murphy's Lectures.*)

We have experienced considerable embarrassment in classifying cases under this head. The natural division seems to be into, 1, those fully dilated; 2, those partially dilated, but easily dilatable, and 3, the partially dilated, but rigid and undilatable. But there are cases, about the location of which we have some doubts. Thus, in Case 61, the os was yet closed when delivery was commenced, but Dr. Rigby, by gradual dilatation, safely overcame the difficulty and successfully delivered the patient. In Case 105, there had been a great deal of blood lost, the os was a "little open," and Smellie advised the doctor to dilate gently during each pain. He did so, and after a few pains the child was expelled. The difficulty is, in distinguishing between different degrees of rigidity in different cases; a certain, or even a considerable degree of rigidty not being inconsistent with dilatability. Others will probably, in some instances, group them differently from what we have done.

Dr. Lee, as quoted above, speaks of 13 out of the 36 cases in his *Lectures* being complicated with rigidity of the os; but this enumeration evidently includes those in which it was at first rigid, but afterwards became dilated. Dr. Simpson (*London Lancet*, 1847, vol. ii.) says that of *eleven* cases of placenta prævia reported by Dr. Lee, in his *Clinical Midwifery*, and in which there was more or less rigidity of the os, with dangerous hemorrhage, *eight* of the mothers died, or 72 per cent. After a careful examination of the 36 cases* of placenta prævia, we find but *five* cases in which death occurred,

* Of those *saved*, the os was *rigid* in Nos. 267, 268, 284, 287, 291, and 296—total, 6; *dilatable* in Nos. 264, 273, 275, 278, 279, 293, and 294—total, 7. Nos. 270, 286, and 292, spontaneously expelled.

Of those *lost*, the os was *rigid* in Nos. 269, 271, 282, 283, and 285—total, 5; *dilatable* in Nos. 266, 276, 280, and 295—total, 4. Nos. 272 and 274, spontaneously expelled. No. 261, undelivered. No. 269, child drawn forth. In the remainder, condition of os not stated.

the os being rigid *at the time of delivery*, and *six* cases of recovery under the same condition. The influence of a rigid os uteri in delaying the undertaking of delivery, we will consider by itself.

Among the *recoveries* in Table I., the cases in which the os uteri was *rigid* and *partially dilated* are—

Case 6, perforation; delivery difficult.
" 16, turning; " "
" 17, perforation; " "
" 27, turning; " "
" 37, perforation; attempts to turn had failed.
" 38, " delivery difficult.
" 39, " " "
" 40, turning; " "
" 58, " " "
" 59, perforation; " "
" 83, turning; forced the fingers, &c.
" 147, " difficult.—Total difficult, 12.
" 25, " easy.
" 28, " "
" 33, " not very difficult.
" 61, " " " "
" 108, " not difficult.
" 153, " admitted the hand.
" 158, " apparently not difficult.—Total easy, 7.

Total of recoveries with rigidity of os, 19.

Among the *fatal* cases in which the os was *rigid*, in

Case 195, labor was "forced."
" 199, turning; delivery difficult.
" 205, " " very difficult.
" 206, perforation; " " "
" 207, turning; " " " laceration of cervix.
" 247, " os thick and hard; died in two hours.

Total in which labor was unusually difficult, 6.

Case 196, turning; not much difficulty.
" 217, " some difficulty.
" 222, " apparently not difficult.

Total in which delivery was apparently not difficult, 3; total deaths with rigidity of os uteri, 9; mortality of 1 in 3¼.

Taking these as a whole, we do not find the preponderance of fatal cases which we might expect, owing, perhaps, to the difficulties of classification which we have referred to. Of the 19 recoveries,

13 were delivered by *turning;* of the 9 deaths, 8 were delivered by *turning.* Of the *seven* cases delivered by *perforation*, only *one* was lost. This shows plainly that diminishing the size of the head, when the os uteri will not allow its ready passage, is a safer process than to attempt to practise artificial dilatation, and deliver by force; and it accounts for the comparatively low mortality just stated. In fact, of the total of the cases delivered by perforation in Table I., twelve in number, *one only was lost.* The proportion of *nine* deaths to *thirteen* recoveries after *turning*, or one in two and four-tenths (1 in 2.4), may doubtless be received as a near approximation to the true proportion of losses under the complication we are considering, inasmuch as it gives a considerably higher rate of mortality than the general mortality of placenta prævia, and is in striking contrast with the results following perforation; though in many cases of delivery by this latter means, the labor is characterized as difficult. If it be objected that these numbers are too small to afford any reliable data, we answer that the number of cases in which rigidity of the os uteri seriously embarrasses delivery is small, compared with the whole number of cases of placenta prævia that are met with in practice.

Furthermore, it is very clear that a rigid condition of the os uteri was, in many instances in the table, the cause of death, from the delay in undertaking delivery to which it gives rise; the hemorrhage continuing, notwithstanding efforts to control it. We cannot doubt, as we have already remarked, that patients are sometimes lost by the inefficiency of their medical attendants; but so long as the condition of the os uteri will not allow of delivery without the exercise of a degree of force which the accoucheur deems imprudent, he is compelled to content himself with the adoption of means which may but partially prevent the loss of blood. It is doubtless true that in many fatal cases the hemorrhage is allowed for this reason to continue, perhaps imperfectly checked, the patient's general condition not exciting serious alarm, but the strength of the vital powers nevertheless diminishing, until, when at last delivery is effected, she sinks from exhaustion. Hence, in its relations to the various conditions which affect it, as the period of pregnancy, the number of the pregnancy, and the stage of labor, the condition of the os is connected more intimately than any other single circumstance with the result to the patient.

The chief expedients that have been resorted to for restraining hemorrhage until the os becomes sufficiently dilated to permit de-

livery, are—1st, rupture of the membranes; 2d, the introduction of the plug; 3d, administration of ergot.

Mauriceau, in 1682, introduced the practice of *rupturing the membranes* in hemorrhage before delivery, with the hope of securing increased contractions of the womb. Its employment in unavoidable hemorrhage has been, for the most part, limited to cases of partial presentation of the placenta, because of the difficulty in reaching the membranes when the os is completely covered by the placenta.

Among *recoveries*, in 17 it is stated that the membranes were ruptured; of these, 12 were partial presentations—Cases 19, 23, 26, 32, 36, 39, 94, 95, 99, 149, 159, 173; 3 were complete—Cases 123, 170, 174; two not stated. In most of these, delivery took place by natural efforts. In Cases 39 and 99, both partial, the bleeding continued after the membranes were ruptured. In Case 123, complete, the hemorrhage was arrested until next day, when she was delivered by forceps. In Cases 170 and 174, both complete, strong pains came on and expelled the child. Among the *deaths*, in Case 189, complete, the patient was in a very alarming condition, and prostration was increased after rupture of the membranes. In Case 206, complete, hemorrhage ceased for a while, but returned; craniotomy was performed. In Case 217, complete, the hemorrhage seems to have ceased, but there was great prostration. In Case 219, nearly complete, very alarming prostration; pains followed rupture of the membranes; ergot and stimulants given, but she died undelivered. Cases 200 and 201, both partial, died at a remote period. These results accord with what we believe to be general experience, that, in most cases of partial presentation, it is the only interference required, and that a large proportion of such cases will be delivered by natural effort; but that in complete presentation it is not easily practised, and, when resorted to, is not to be relied on as a means of checking hemorrhage. Some, however, have little confidence in the efficacy of this expedient. Dewees is opposed to it on account of the difficulty of its performance, and the risk of increasing the hemorrhage by separation of the placenta; because, where the waters are evacuated, "it will very rarely stop the hemorrhage," and because of the embarrassment it may cause to delivery, in case of version becoming necessary. He says: "Baudelocque assures us he never saw but one case where the hemorrhage ceased after the discharge of the waters."

The employment of *ergot* is noted in but few of our cases, and mostly without any distinct statement as to its effects. In most

instances, it was resorted to in connection with rupture of the membranes or turning, in order to insure more efficient contractions of the womb. Thus, in Case 36, partial, the membranes were ruptured, ergot given, and spontaneous expulsion followed. In Cases 110, partial, and 169, complete, both the pains were inefficient; ergot was given, and spontaneous expulsion took place. In Case 171, partial, ergot was given, and alone sufficed to insure delivery. In Case 21, p. 278 of Lee's *Clinical Midwifery*, it is said that "pain followed the ergot, and a great increase of discharge." This is the only instance in which any unfavorable result is spoken of. Dr. Lee, in connection with this case, says (page 154): "Ergot should never be given in hemorrhage till the fact is determined that the placenta is not attached to the neck of the uterus. It can do no good in presentations of the placenta." Again, of his 35 cases, he says (p. 164): "The tampon, or plug, was not beneficial in any of them, and the ergot did positive injury."

Dr. F. Ramsbotham, on the other hand, speaking of cases of great prostration, says: "In most cases, we shall find the ergot a serviceable remedy after the stimuli have taken effect, and before the operation is proceeded with. A dose or two of this medicine, indeed, may be given in every instance of placental presentation, previously to the delivery being undertaken, if time admit of its exhibition."

The failure of ergot to increase the uterine contractions is doubtless owing, in many instances, to a neglect of the hint afforded in the above extract, viz: to give it after the stimuli have taken effect. This point of practice, which we believe is not generally understood, is very clearly set forth by Dr. Murphy in his *Lectures on Midwifery*, London edit., 1852. He says: "Ergot is often *misused;* it is given as a specific, when it is impossible such an effect is produced; the nervous system must be capable of conveying the necessary impressions. Ergot is quite insufficient in nervous exhaustion of the uterus, because so far from acting as a stimulant, it produces a sedative effect on the heart. Opium is, therefore, of the highest value in saving the patient from the consequences of extreme flooding—ergot in preventing such hemorrhages."

There is another point deserving of consideration—the value of ergot in cases of rigidity of the os. In ordinary labors, an undilated os would contra-indicate its employment. In cases of complete placental presentation, however, hemorrhage is almost uniformly sufficient to materially impair the patient's strength and render the uterus atonic; consequently there can be no danger of injury from contractions induced by ergot. The question is, will

ergot in such cases give tone to the uterine muscles, and favor the dilatation of the os? Dr. Murphy seems to allude to the administration of ergot with this intent, while treating of the management of placenta prævia, with rigidity of the os, he recommends rupture of the membranes, plugging, ergot and opium, as available.

Dr. James Fountain, of Peekskill, N. Y., a practitioner of over forty years' standing, in a communication, states that for the first twenty years of his practice he delivered nearly one hundred women annually, and in the course of his practice, has had not over *twelve* cases of misplaced placenta; all except three or four were partially over the os uteri; in two cases it seemed placed very centrally. In every case excepting these two, he found the os sufficiently dilated to admit of the introduction of the hand. In the other two cases, the os uteri was "so firm, thick, and unyielding, that I deemed it not best to introduce the hand, but to arrest the flooding till the os was in a more favorable condition. In both cases, and, I presume, in all such, the hemorrhage ceased during the pains, except just at their commencement. To secure a *constant pressure* on the placenta, and thereby to stop the flow mechanically, I gave a full dose of *ergot*. It always produces one constant, pressing pain, you know. The effect lasted about half an hour; then the hemorrhage began to return, but I had gained on the os; so, to secure a further relaxation, I repeated the ergot, and with the same success. At the end of another half hour, I found the os so far dilated, that I concluded to proceed. I bored my hand quickly through the placenta, turned the child, and as my hand came down, I detached the placenta and quickly brought all away together. Success was complete —both children were living. I published a history of these cases, I believe in the *American Journal* of Philadelphia. I believe the idea was purely my own. I never lost a case from hemorrhage." Dr. Fountain saw two die; these were not his patients, and were *in articulo mortis* when he reached them.

The two cases here related are suggestive of the inquiry, if a more frequent resort to the ergot, with a view, as in these cases, of restraining hemorrhage while the process of dilatation is going on, might not often be attended with success.

Dr. Isaac E. Taylor, of New York City, having seen two cases in which the placenta was entirely expelled before the birth of the child, and another in which the separation of the placenta was almost complete, has made a similar suggestion as regards the use of ergot, to that put in practice by Dr. Fountain. In a letter with which Dr. Taylor has obligingly favored us, he says: "I even think

that if a case of placenta prævia should present itself to me again, and the os uteri only opened to the size of a sixpence or a shilling, I could discover the head to be certainly present, I would either give the secale cornutum in small doses every fifteen or twenty minutes, to increase the strength of the pains if they were feeble; or, if active, and the hemorrhage continuing, endeavor to puncture the membranes through the placenta, let off the liquor amnii, and then give the secale cornutum. In this manner, trying to act, as near as possible, to the course nature unaided adopts, as we see in spontaneous separation; allowing the head to be the tampon to the vessels." In Case 182, the ergot seems to have been given with this intent.

In *twenty eight* cases only, is the use of the *tampon* noted. It appears to have been resorted to chiefly in cases of *complete* presentation, of which there were 15, and in but 3 partial; in the remaining ten, the degree of the presentation is not stated. In five, the effect in suppressing hemorrhage is not stated. In Cases 1, 40, 92, 115, 213, 218, 231, 232, 234, 236, 237, 239, 297, total thirteen, hemorrhage was suppressed for a longer or shorter time, generally for several hours. In Cases 100, 169, 174, 183, 237, pains came on after its introduction. Case 174 was apparently dead when the plug was introduced; stimulants were given, and as pains returned, the membranes were ruptured, and the child expelled by natural efforts. In Case 96, and in another reported by Mad. Lachapelle, in which the placenta was separated spontaneously before the birth of the child, the pains and the hemorrhage were increased by the tampon. In Cases 196, 218, hemorrhage came on while the tampon was in the vagina. In Case 218 the tampon was saturated, and a copious flow from the vagina ensued, after bleeding had been once arrested. Of the fifteen *complete* cases there were *nine* recoveries and *five* deaths—Case 213, fatal, was apparently complete. Of these six, viz: Cases 196, 213, 218, 231, 236, 239, Case 231 is the only one that seems to have died from the immediate effects of loss of blood, as will be seen by the table of the periods at which death occurred. Cases 232 and 237 were partial; the first died on the 9th day of apoplexy, ovaritis, &c., and the second died on the 16th day. Case 234 died under three hours, but whether this was partial or complete is not stated.

These cases show plainly that the tampon is a very precious resource, in cases of complete placental presentation, in restraining hemorrhage, while the os is undergoing the softening process. From the small number of cases in which its employment is noted, it

would appear that it is resorted to much less frequently than its importance deserves. This doubtless is owing, in no small degree, to the circumstance that its use has been discouraged by some eminent authorities, the opinion of one of whom, we have already given, as to its value. In only *five* of the twenty-eight cases is the occurrence of pain after the introduction of the tampon noted. If this afford anything like the proportion of cases in which pains are likely to follow, it is evident that the principal objection to its employment in any case loses much of its force. But this can be no objection in any but cases of hemorrhage in the earlier months, when it will be prudent to abstain from its employment, until the failure of other means to restrain the flow of blood indicates the impossibility of conducting the case to the full time. Again, in cases in which it has failed to arrest hemorrhage, it is worthy of consideration if this be not owing to the imperfect manner in which the introduction of the tampon is effected.

Cases 114, 115, 116, 117, are reported by Mr. Radford as illustrative of the fact that the placenta undergoes alterations if the child dies previous to delivery; and that the hemorrhage in consequence ceases, and does not return when labor comes on. In two of these, the presentation was complete, and in two not stated, and in neither was there any hemorrhage at delivery. The plug was employed in each, and with other means suppressed the hemorrhage in the early months, and after this the motions of the child were not again felt.

Fate of the Child.

Among the *recoveries* by the mother, in Table I., in which the fate of the child is noted, in 46 cases the child was *living*, and in 61, or 57 per cent., it was *dead*. Among the *deaths* of the mother, in 10 the child was *living*, and in 23, or 70 per cent., *dead*, affording a total of 56 living, and 84 lost. The eleven cases among the recoveries and the five among the deaths, in which the child had been a long time dead, are not included, as they are not to be considered in comparing the influence of different modes of treatment upon the life of the child.

Adding to these cases those in Dr. Lever's table, and incorporating them in the table below, we have a total of *seventy-four* children saved and *ninety-nine* lost. If we add to these the results of Dr. Merriman's experience, viz: 22 children saved and 67 lost, we get a total of *ninety-six* saved, and *one hundred and sixty-six* lost, or 1 in 2.7 of the whole saved.

Table showing Age of Children at Delivery.

MOTHERS RECOVERED.

CHILD LIVING.								CHILD DEAD.					
6th month.	7th month.	7½ month.	8th month.	8½ month.	End of 8th month.	9th month.	Full time.	7th month.	7½ month.	8th month.	8½ month.	9th month.	Full time.
Case 21 " 128	Case 88, c. ? " 137, " 169, c. 1, p. 1, p. 1, p.	Case 93, p.	Case 5, p. " 20, " 30, c. " 111, c. " 118, " 154, c. 1, c. 1, c. 1, p. 1, p. 1, p.	1, p. 1, p. 1, c. 1, p.	Case 89, c. ? " 99, " 105, " 155, c.	Case 23, " 67, p. " 125, c. 1, p. 1, c. 1, c.	Case 3, " 4, p. " 9, p. " 64, c. " 73, c. " 85, c. " 124, " 163, p. " 182,(a) c. " 183,(b) c.	Case 93, " 101, 1, p.	Case 92, c. " 163, c. " 149, p. " 159, p. " 181, c. 1, p.	Case 15, p. " 17, " 34, c. " 37, p. " 38, p. " 39, p. " 63, c. " 91, c. " 94, p. " 100, " 131, " 148, c. " 174, . 1, p. 1, p. 1, c. 1, p. 1, c.	1, c. 1, c. 1, c.	Case 43, c. " 98, 1, c. 1, p.	Case 2, p. " 6, p. " 7, p. " 66, c. " 71, c. " 109, " 157, c. " 160, c. " 166, c. " 170, c. " 172, c. " 178, c.
2	6	1	11	4	4	6	10	3	6	18	3	4	12

MOTHERS LOST.

	Case 198, c. " 238, p.		Case 203, p. " 239, c. 1, c. 1, p. 1, p.		Case 237, p.		Case 193, c. " 194, c.	Case 202, p.	Case 206, c. " 230, p. " 236, c.	Case 217, c. " 218, c. " 232, p.	1, c. 1, c. 1, p. 1, p.	Case 235, c.	Case 187, " 190, c. " 219, " 230, p. " 241, c.
	2		5		1		2	1	3	3	4	1	5
Total 2	8	1	16	4	5	6	12	4	8	21	7	5	17

c. Complete presentations. p. Partial ditto.

This table does not include children long dead.

From this table we learn that there were—

From 6th to 7th month, inclusive, 10 living, 4 dead, total, 14.
" 7th " 8th " 17 " 30 " 47.
" 8th " 9th " 9 " 7 " 16.
" 9th " full time " 18 " 22 " 40.

The proportion of living to dead children, in births previous to ninth month, is about the same as those occurring at full time; but it will be seen that from the sixth to the seventh month, there are *ten* living and *four* lost; which can scarcely be the proportion of children saved at that early period.

Management of the Placenta.

Of complete presentations of the placenta in which the fate of the *child* is noted, and turning performed, it was perforated by the hand in 17—8 *children* living, 9 dead.

In 1 it was lacerated in delivery—1 living, 0 dead.

In 27 it was partially separated, and the hand passed by—9 living 20 dead.

In 29 apparently, treated in same way—10 living, 19 dead.

Separation of the placenta to a degree sufficient to admit the hand, has been almost universally recommended by authors, on the ground of the difficulty attending perforation by the hand, and increased risk to the child from laceration of the bloodvessels of the placenta. Dr. Rigby, p. 60, recommends perforation when the placenta entirely covers the mouth of the womb, on the ground of avoiding an increased separation of the placenta. General experience is in favor of separation to the extent required for the introduction of the hand for the purpose of turning. If, however, as in some of our cases, this separation is very difficult, or even impracticable, it is satisfactory to know that the risk to the child is not materially increased by such a step, if we may rely upon the above data.

TABLE II.—*Spontaneous Separation and Expulsion.*

No.	BY WHOM AND WHERE REPORTED.	AGE.	NO. OF PREGNANCY AND GENERAL HEALTH.	PERIOD OF PREGNANCY.	PARTIAL OR COMPLETE.	STATE OF OS UTERI.	PRESENTATION.	GENERAL CONDITION.	DURATION AND DEGREE OF HEMORRHAGE PREVIOUS TO SEPARATION OF PLACENTA.	DISPOSAL OF PLACENTA.	MODE OF DELIVERY.	TIME BETWEEN ITS SEPARATION OR EXPULSION AND BIRTH OF CHILD.	HEMORRHAGE AFTER SEPARATION OR EXTRACTION.	FATE OF MOTHER.	FATE OF CHILD.
252	Wm. Harding, Lond. Lancet, 1845, ii. 575.			8th month			Foot	Fainted and fallen.	A great discharge, and she felt faint.	Found in vagina.	"Natural pains, and gentle means."	Over half an hour.	None.	Presumed recovered	Not stated.
253	E. A. Cory, London Lancet, 1845, ii. 629.			Presumed full		Fully dilated.	Arm			Found in vagina, and removed.	Version and evisceration of dead fœtus.		When found, scarcely any attendant hemorrhage.	Recovered	Dead.
254	Dr. Waller, London Lancet, 1846, i. 304.						Arm			"Came away."		5 hours.	None.	Recovered	Not stated.
255	Ibid.									"Came away before the child."				Recovered	Not stated.
256	J. J. Tweed, London Lancet, 1846, i. 9.	22	2d pregnancy; had 1 miscarriage	7th month		Size of crown piece when placenta found detached.	Head		Profuse hemorrhage, increased at each pain; controlled by plug.	2 hours after plugging, it was found detached, and in 2 hours more it was expelled.	Aided by ergot.	1½ hours after expulsion.	Almost entirely ceased, when placenta found detached, and ceased after its expulsion.	Recovered	Dead.
257	Mr. T. Lloyd, Lond. Lancet, ii. 515.	30	16th pregnancy	Full time			Abdomen			Placental mass, weighing 4 lbs., found in the vagina.	Spontaneous evolution under a powerful pain.		None when found.	Recovered	Putrid.
258	S. R. Goddard, Lond. Lancet, 1845, ii. 645.		2d pregnancy	7th month	Partial	Partially dilated, when placenta partially protruded.	Funis, both arms, and legs	Pains, accompanied by slight hemorrhage.	Hemorrhage for over 7 hrs. before placenta found protruding.	Separated spontaneously, and eventually expelled.	Expelled under strong pains.	Several hours after separation.	Entirely ceased on expulsion of placenta.	Recovered	Dead.
259	Mr. Tennent, from Lond. and Edinb. Journal, 1845, in Prov. Medical and Surgical Journal, 1845, p. 472.	42	14th pregnancy	7th month	Complete	Dilated.	Head	Hemorrhage controlled by treatment.	Repeated profuse hemor'ges some days before labor.	Placenta expelled spontaneously.	Child followed the placenta.	10 minutes from expulsion of placenta to birth of child.	No post-partum hemorrhage.	Recovered	Dead for some days.
260	J. S. Barker, Prov. Med. and Surgical Journ., 1845, p. 591.		2d pregnancy				Arm	Pains came on 4 hrs. before arrival; felt faint and weak; small, quick pulse.	Hemorrhage at intervals during 2 weeks; came on with the pains, and lasted 1 hour.	Found in vagina.	Turning.	Less than 4 hours.	No hemor'age after placenta was found.	Recovered	Not stated.
261	Edward Ray, Prov. Med. and Surgical Journ., 1848, p. 124.	27	2d pregnancy	7th month; twins	Bulging through the os	Os dilated; uterus firm.	Foot of first child; head of second	Blanched, cold, almost pulseless, unconscious, and bleeding.	Immense hemorrhage, continuing after expulsion of first child, the placenta remaining.	Double placenta expelled with the waters of the second child, previous to its birth.	Membranes ruptured; foot of first child brought down; slight pains came on; "child delivered;" second bag of membranes ruptured; placenta expelled spontaneously.	3 hours.	After expulsion of placenta, no hemorrhage to birth of child; during 2 hours, there were no pains; child born at end of third hour.	Tedious recovery; hemor'age from deficient contractions	Both dead.
262	Mr. John Chapman, Duncan's Annals, iv. 308.		4th child	8th month		At 9 P. M., os size of a crown piece.	Head	Pains came on at 9 P. M., very strong; edge of placenta protruding, more and more detached every pain.	Hemorrhage not alarming; "from its first protrusion through the os, to its complete expulsion through the os externus, lost little more blood than in common labor."	Nearly 3 hours from its first protrusion to its final expulsion.	On expulsion of placenta, pains ceased; in 2 hrs., attempted version; failed; tinct. opii; natural expulsion soon afterwards; no hemorrhage.	Full 4 hours.	"Lost *little* or no blood."	Recovered	Not stated.
263	Dr. Collins, Case 92.	30	6th labor	Full time			Foot	Admitted in a state of great debility; pulse scarcely to be counted.	Membranes had ruptured a fortnight before; since which, till the previous evening, there was more or less hemorrhage.	Placenta had been expelled the evening before, and separated by the midwife.	Foot in vagina, and putrid; child extracted.		No hemor'age after *delivery*.	Recovered and left on 13th day	Putrid.
264	Dr. Waller, Braithwaite's Ret., from Med Times, 1845, p. 233; Case 5.			6th to 7th month	Nearly complete		Cross birth	Hemorrhage trifling; uterus firmly contracted around the child.	Labor was slow; after escape of waters, there was a sudden, rather profuse gush of blood.	Expelled.	Child doubled up; soon followed the placenta.	Soon.	"There was no hemor'age."	Recovered	Long dead.
265	Ibid., Case 6.											1½ hours.	No circulation through placenta, and hence no bleeding.	Recovered	Long dead.

TABLE II.—*Spontaneous Separation*

NO.	BY WHOM AND WHERE REPORTED.	AGE.	NO. OF PREGNANCY AND GENERAL HEALTH.	PERIOD OF PREGNANCY.	PARTIAL OR COMPLETE.	STATE OF OS UTERI.	PRESENTATION.	GENERAL CONDITION.
266	Smellie, collection 18, No. 3, Case 5, ii. 273.		Multipara			Os largely open.		
267	Ibid., Case 6.		2d pregnancy	End of 8th month			Head	
268	Ibid., Case 7.			Premature				
269	Mad. Lachapelle, ii. 461.	40		Middle of 9th month		Not open on admission, to allow of turning; in 1 hour after tampon, it permitted delivery.		Had some labor pains; renewed by tampon.
270	Mauriceau, Case 502, according to Dr. Lee's table in Lond. Lancet, 1847, ii. 439.			8th month				
271	Ibid., Case 651.			6th month				
272	Ibid., Case 484.			8th month				
273	R. Bayard, by Prof. Anderson, in New York Med. Journ., i. 463.		Multipara; frequent miscarriages at 4 months			Finger assisted dilatation of os.		Was faint; pulse quick and feeble; occasional slight pains; plugged; in 4 hours, pains increased.
274	Communicated by Dr. Wm. Boling, Montgomery, Ala.	44	Robust negro; 20th child	Full period			Arm and funis	At 12 M., pains had not been severe; much prostrated by bleeding after delivery.
275	Communicated by Dr. Isaac E. Taylor, New York.				Complete			Labor lasted a few hours; pains active throughout.
276	Ibid.							This case similar to the first.
277	Lee's Lectures, Case 10.			7th month	Placenta protruding			
278	Mr. Cripps, reported by Dr. Simpson, in London Med. Gaz., xxxvi. 1011.			Early part of last month			Arm	Pains very severe; a drachm of laudanum given to quiet them.

and Expulsion—Continued.

DURATION AND DEGREE OF HEMORRHAGE PREVIOUS TO SEPARATION OF PLACENTA.	DISPOSAL OF PLACENTA.	MODE OF DELIVERY.	TIME BETWEEN ITS SEPARATION OR EXPULSION AND BIRTH OF CHILD.	HEMORRHAGE AFTER SEPARATION OR EXTRACTION.	FATE OF MOTHER.	FATE OF CHILD.
Flooding, at beginning of 9th month, for several days; in 8 or 9 days, increased discharge came on.	Found pushing through os externum.	Child immediately followed placenta.			Recovered	Living.
	Expelled by a pain; much lacerated.	After escape of waters, the bleeding stopped; midwife, feeling a fleshy substance come down, tried to pull it away, causing increased hemorrhage.			Recovered	Dead.
Considerable hemorrhage.	Found in the vagina, and expelled with the membranes entire.	Expelled in the bag of membranes.			Recovered	
Sudden great flooding; on admission, had been bleeding 8 days.	Entirely separated before delivery; it *followed* child.	Turning.			Recovered	Dead.
	Entirely separated from os uteri.	Turning.			Recovered	
Flooding.	Entire detachment of placenta.				Recovered	Dead.
Great hemorrhage.	Presenting, and entirely detached.	Turning.			Death in 12 days, from diarrhœa	
Came on in 4th month; plug, &c.; renewed in 7 or 8 weeks; had lost much blood.	Part of placenta protruded; the whole at length expelled.	Fœtus followed in a few minutes.		Ceased after delivery.	Recovered	Dead.
Was taken in labor at 1 A. M., with considerable hemorrhage and discharge of waters.	At 1 P. M., placenta found floating in a pool of blood in bed.	Morphine given preparatory to turning; pains increased, and, in 45 minutes, delivered by spontaneous evolution.	45 minutes.	At 1 P. M., hemorrhage, which had been profuse but a few moments before, *ceased entirely*, and did not return.	Recovered favorably	Dead.
Labor came on suddenly, having had slight bleeding for a few hours previous; the loss of blood was "startling," and it was still flowing.	In a half hour, it was discovered coming through the vagina.	Child immediately followed the placenta.		In both these cases, hemorrhage ceased from being very active, so much so as to quiet my mind respecting the welfare of the patient.	Recovered	Dead.
Profuse hemorrhage.	Traction made on placenta, and the contents of the uterus expelled entire.	Expelled.			Recovered	Living.
Occasional; slight for a week previous; severe pains came on, with a good deal of hemorrhage.	It "had come in the morning;" was withdrawn, and cord cut.	Turning 10 hours after expulsion of placenta.	10 hours.	"No hemorrhage whatever."	Recovered	

TABLE II.—*Spontaneous Separation*

NO.	BY WHOM AND WHERE REPORTED.	AGE.	NO. OF PREGNANCY AND GENERAL HEALTH.	PERIOD OF PREGNANCY.	PARTIAL OR COMPLETE.	STATE OF OS UTERI.	PRESENTATION.	GENERAL CONDITION.
279	Dr. Lee's Lectures, Case 4.			7th month	Placenta protruding			Insensibility; coldness of extremities.
280	Communicated by Dr. Isaac E. Taylor, New York.			Full time	Complete	Os dilated suddenly; dilated after removal of tampon.	Head	When seen in consultation in evening, was blanched and restless; slight vomiting; pains slight and every 15 minutes.
281	Smellie, vol. ii., collection 18, No. 3, Case 3.						Head and funis	Lips pale; extremities cold.
282	Ibid., vol. iii., collection 33, No. 2, Case 10.					Os largely dilated.	Head	Had no pains; waters escaped an hour before; faint, and almost pulseless.
283	Mr. Stedman, Lond. Lancet, 1845, ii. 454.							
284								
285								
286	Mr. John. L. I'On, Lond. Lancet, 1845, ii. 644.							
287								
287 (*a*)	Dr. Jas. Reid, Lond. Med. Gaz., 1845, ii. 1324.	23	Primipara, delicate, and weak	7½ month				

and Expulsion—Continued.

DURATION AND DEGREE OF HEMORRHAGE PREVIOUS TO SEPARATION OF PLACENTA.	DISPOSAL OF PLACENTA.	MODE OF DELIVERY.	TIME BETWEEN ITS SEPARATION OR EXPULSION AND BIRTH OF CHILD.	HEMORRHAGE AFTER SEPARATION OR EXTRACTION.	FATE OF MOTHER.	FATE OF CHILD.
Profuse hemorrhage.	Placenta extracted.	Expelled by natural effort.			Recovered	Dead.
Considerable during day and evening; was plugged.	Almost entire separation of placenta took place in a few minutes, as the head came down; removed after birth, being still slightly attached to the edge of the os.	When head descended, ergot given, and child soon born.			Recovered	Living.
Membranes had broken, and flooding abated.	Placenta lying in the vagina, along the sacrum; "finding it hindered the head, I drew it down."	Spontaneous delivery.			Recovered; a long time weak	Dead.
Occasional flooding for several days; suddenly broke out free.	"As the placenta lay in my way, I brought it away."	Turned and delivered with great ease, excepting the head.			Recovered	Dead several days.
	Had seen 3 cases in which the placenta was expelled.			And the hemorrhage in each case immediately ceased.		
	"Primary separation of the placenta," in which "the unavoidable hemorrhage immediately ceased," has occurred twice under my own observation.					
Copious bleeding 3 separate times before; severe flooding for 1 hour, when the placenta was expelled.	Expelled.	Child expelled.	Somewhat over an hr.	"Hemorrhage immediately ceased," and no recurrence again.	Died in 8 days from diarrhœa	Dead.

Table II.

Cases of Spontaneous Separation of the Placenta before the Birth of the Child.

On analyzing these thirty-six cases of spontaneous expulsion of the placenta, in twenty-nine in which the result is mentioned, we find but *two deaths;* one eight days, the other twelve days after delivery, both from diarrhœa.

We are struck at once by the fact that, in these cases of spontaneous separation of the placenta, the womb acted with much more vigor than in cases of this accident in general. In *nine* the pains are spoken of as *strong*, in some very strong; in five others the pains are expressly spoken of, and in most of the others it is evident that active labor existed.

Of the 36 cases, there were—

16 delivered by spontaneous expulsion.
1 apparently so.
3 assisted by traction on foot.
9 mode not stated.
7 delivered by turning.

Of these *seven*, three were *arm presentations*, of course requiring turning; in Case 269 the placenta was separated only, not expelled from the uterus, and in Cases 270, 272, 282, it is reported as only detached from the os, implying sufficient uterine contraction to separate, but not to expel it. It is plain, then, that these cases of spontaneous expulsion of the placenta are not fair examples of placenta prævia as generally met with, but that they are exceptional, and, for the most part, those in which the womb acts with vigor sufficient to expel both the placenta and the child.

On turning to Dr. Simpson's table of cases of expulsion and extraction of the placenta, previous to the birth of the child, in the *London and Edinburgh Monthly Journal*, for 1845, among the remarks, p. 188, we find that of 116 cases in which the mode of delivery of the child is noted,

in 50 manual assistance was required,
in 66 delivery by natural pains.

Seven of our cases are to be found among Dr. Simpson's; deducting these from their respective classes, and adding the remainder to those of Dr. Simpson, we get as a total of all the cases which we can find recorded—

59 in which manual assistance was required.

78 delivered by natural effort, or 57 per cent.

Now, on referring to the deductions from our first class of cases, we find that—

236 required artificial aid, and but

50 delivered by spontaneous expulsion, or 17 per cent.

Unfortunately, Dr. Simpson has not distinguished the cases of artificial separation from those of spontaneous separation of the placenta. Mr. Radford, two years after the publication of Dr. Simpson's paper, published in the *London Lancet*, 1847, vol. ii. p. 434, a table of about forty cases of artificial, and several of accidental separation, including all that had been published to that date. We recognize, if we are not mistaken, twelve of these among Dr. Simpson's, viz: Cases 3, 8, 12, 19, 29, 58, 59, 72, 73, 81, 82, 113; the remaining 129 were consequently cases of spontaneous separation. Of these twelve, two were expelled by natural pains, and are, therefore, to be deducted from the 66 above, leaving 64 that were delivered by the natural powers after a spontaneous separation of the placenta. Mr. Radford enumerates two of Smellie's among those of artificial separation, but, as we think, on insufficient grounds, and we have included them in Table II.

After making these deductions, we find a very marked disproportion between the cases that required artificial delivery in these two classes of cases, viz: those in which the placenta was separated and expelled before the birth of the child, and those in which it became detached, as usual, after delivery. The only explanation that can be given is, that *cases in which the placenta is expelled before the birth of the child, as a class, are characterized by a tonicity of the womb and a vigor of uterine contraction which we do not find in ordinary cases of the accident;* the proof of this being in the large proportion of cases in which delivery is *perfected* by the unassisted efforts of the uterus.

Since these cases differ from others in so important a respect, a comparison of the mortality under such circumstances with that following delivery by the ordinary methods is calculated to mislead. Were the discrepancy small, we should hesitate in venturing the assertion; but the disproportion alluded to is too great to be merely accidental.

Again, we have already stated that those delivered without manual aid in Table I., as a class, seem to have been of a milder character than those delivered by artificial assistance; that the

hemorrhage previous to delivery was less in these; that, in a large proportion of such cases, the presentation of the placenta was *partial*, whereas in a large proportion of cases delivered by art, the presentation was *complete*.

Comparing cases in which bleeding was *moderate* with those in which it was marked, *considerable*, and *severe* together, we found among

Deliveries by art, 1 moderate in 9.5 severe, &c., and among
Natural deliveries, " 6.5 "

Of 111 of Dr. Simpson's cases, in which hemorrhage before expulsion is noted, it was "great" or "considerable" in 96, and slight, or "little or none," in 15, being 1 in 7.4.

If we select his cases of delivery of the child by spontaneous expulsion, in which the amount of previous hemorrhage is stated, and add to them those among our thirty-six cases not already included among his, we get *sixty* "*severe*" and "*considerable*" and *twelve* "*moderate*," or 1 in 6 moderate, a proportion almost identical with that among spontaneous deliveries in Table I.

Whether a correspondingly large proportion of *partial* presentations would have been found among these, we cannot tell, as this particular is not noted in Dr. Simpson's table, and in very few of our own cases; but as spontaneous deliveries in Table I. were to a large degree in cases of *partial* presentation, the probability is that the same is true in spontaneous deliveries after spontaneous detachment of the placenta. The existence of a partial instead of a complete presentation of the placenta would account, in a degree, for the spontaneous expulsion both of placenta and child; inasmuch as the hemorrhage being less, for the most part, and there being, above all, comparatively little risk of those sudden deluges which so often accompany complete presentations, and which paralyze at once the energies of the uterus, labor once established goes on to a natural and successful termination.

A comparatively small mortality attends these cases. We have but *two* fatal cases out of twenty-nine in which the result is mentioned, and in these the result was apparently not immediately connected with the labor. Dr. Simpson's table contains *ten* fatal cases, in several of which the result seems remotely, if at all, connected with the labor. Taking from the 131 recoveries in Dr. Simpson's table 11 recoveries after artificial separation, making 120 recoveries; and from the 10 deaths in his table the 1 death after artificial separation, making 9 deaths; and adding the 20

recoveries and 2 deaths in our table, we get 140 recoveries and 11 deaths, or 1 in 13.7, as the mortality after spontaneous expulsion of the placenta.

After the separation and expulsion of the placenta, hemorrhage for the most part ceased. Of *twenty-two* of our cases, in which the degree of subsequent bleeding is noted, it ceased in *fourteen;* in *one* there was none during labor, in consequence of the previous death of the child; in *two* there was no bleeding when found, after separation or expulsion had taken place. In Case 256 it was slight after detachment, and ceased after expulsion; in *four* it continued very slight.

Besides the cases in Table II., we find allusions to certain others. Mr. Crisp (*Lond. Lancet*, 1845, vol. ii.) had been informed by two practitioners of "cases" similar to these, in which hemorrhage had continued for some time, the placenta was expelled, and there was no hemorrhage. Of the 70 of Dr. Simpson's cases in which it was noted, in 44 it was completely arrested; in 10 it continued very slight, almost none; in 9 inconsiderable; in 1 considerable; in 1 a good deal; in 5 profuse.

It may therefore be stated with confidence that, in by far the largest proportion of cases of spontaneous expulsion of the placenta before the birth of the child, hemorrhage ceases entirely, or continues in a very inconsiderable degree.

From this circumstance, as is well known, Dr. Simpson has recommended the artificial separation of the placenta in certain cases of placental presentation.

The suggestion is a natural one, but it seems improper to *assume* that similar successful results will follow the artificial separation. We think we have shown that, to anticipate from this expedient a success equal to that following spontaneous separation, might lead to disappointment; because the latter, as a class, are characterized by pains sufficiently strong, in a majority of cases (78 to 58), to expel the child as well as the placenta.

We proceed with interest to the next inquiry, With what success has the *artificial separation* of the placenta been attended?

It may be proper to state that, up to this point, we have not analyzed our cases of artificial separation, and are consequently ignorant if the views above stated are sustained by statistics or not.

TABLE III.—*Artificial Separation and Extraction of Placenta.*

NO.	BY WHOM AND WHERE REPORTED.	AGE.	NO. OF PREGNANCY AND GENERAL HEALTH.	PERIOD OF PREGNANCY.	PARTIAL OR COMPLETE.	STATE OF OS UTERI.	PRESENTATION.	GENERAL CONDITION.	MANAGEMENT OF PLACENTA.	MODE OF DELIVERY.	DURATION AND DEGREE OF HEMORRHAGE PREVIOUS TO SEPARATION.	TIME BETWEEN ITS SEPARATION OR EXPULSION OR EXTRACTION AND BIRTH OF CHILD.	HEMORRHAGE AFTER SEPARATION OR EXTRACTION.	FATE OF MOTHER.	FATE OF CHILD.	REMARKS.
288	J. Jones, Lond. Lancet, 1845, ii. 347.		6th child	Presumed full	Covered nearly ⅔ of os	Full dilated.	Head	Danger imminent; almost speechless; slightly delirious.	Adherent part separated by fingers in less than a minute, and extracted.	Ergot given.	Over 4 hours; most profuse.	About an hour and a half.	Not over a teacupful.	Recovered	Dead	
289	George Brown, London Lancet, 1845, ii. 694.		2d child	7th month	Nearly complete	Size of half-crown; extremely rigid.	Head	Seemingly urgent.	Separated easily with forefinger, and at length expelled after the child.	Waters evacuated to no purpose; ergot 3 hours after separation of placenta.	Severe; after escape of waters, "blood poured forth with unabated violence."	Over 3 hours.	Almost immediately ceased, and no return.	Recovered	Dead as was thought before separation	During the three hours, had no pain.
290	Mr. Howell, in London Lancet, 1846, i. 304.				"Partially detached;" complete	"Tolerably rigid, and slightly dilated."	Head	"Considerable hemorrhage, and slight pains."	"Removed entirely."	Nine hours after removal, "no *labor pains* having come on," head was perforated.	Considerable.	9 hours.	Did "not exceed 2 ounces."	Recovered	Lost	
291	Dr. Waller, in London Lancet, 1846, i. 304.				Nearly entire		Funis	"Was able to sit up," but lost much blood.	"Detached by hand."	"Child was delivered."	Had lost much blood.	Apparently at once.	"Ceased."	Recovered	Living	
292	Ibid.				Apparently complete	Admitted 2 fingers.	Arm	Danger imminent.	Detached placenta by 2 fingers, but did not remove it.	Version after some hours.	Hemorrhage for many days, and "still dangerous loss of blood."	Some hours.	"Ceased" after separation, and no return.	Recovered	Presumed dead	
293	Sir Fielding Ould, 1742; quoted by J. M. Waddy, Lond. Lancet, 1846.			Full		Dilatable.	Head	"Ready to expire."	"Extracted."	Version after extraction.	Hemorrhage came on in morning; delivered at noon.	Apparently delivered at once.	Not stated.	Recovered	Living	
294	Thos. Lloyd, in London Lancet, 1846, ii. 124.		6th pregnancy	8th month	Complete	Very slightly dilated.	Head	Large gushes of blood, and fainting.	"Detached;" not removed.	Hand passed by placenta, and version, having dilated the os.	Copious from morning till noon.	Time required for dilating the os uteri, and for version.	After version, it is said "hemorrhage now ceased."	Recovered	Living	In a few minutes, the foot of a twin came down; uterus expelled it and the placenta.
295	B. Tallan, Lond. Lancet, 1846, ii. 526.		6th labor	Presumed full	Found partially attached	Size of crown piece.	Head	Extreme prostration; profuse hemor'age; no pains.	"Separated" it.	Plugged, and gave ergot; separated the placenta, and turned; no pains; ergot.	Flooded profusely; unattended for 18 hours.	Turned at once.	"Not over 4 ounces after first seen."	Died in ½ of an hour after delivery	Presumed dead	
296	W. G. Cory, in London Lancet, 1847, i. 25.	29	4th labor	Full period	Complete	Size of crown piece; yielding.	Head	"Powers of life on the decline;" pains continue.	"Extracted."	Natural efforts, aided by ergot.	At intervals, for 4 days; at last severe.		After "extraction," it ceased "almost entirely."	Recovered	Living	
297	Dr. P. Smith, in London Lancet, 1847, ii. 123.	32	9th labor; pale and delicate	8th month	Complete	Dilated.	Foot	Critical; pains feeble.	Two-thirds in the vagina; the rest detached.	Ether quickened the pains.	Had severe hemor'age several hours previous; checked spontaneously; renewed, and stopped by plug; then very profuse.	Short time.	Instantly and entirely ceased.	Doing well on 3d day	Dead	
298	G. F. Meadows, London Lancet, 1848, i. 27.	39	3d labor	Presumed full	Complete	Dilated.	Head	Complete exhaustion; almost senseless; slight pains.	Detached and withdrawn.	Stimulants before separating the placenta; ergot after.	Repeated for 2 months; excessive hemor'age.	An hour and a half.	"Immediately ceased."	Recovered	Dead	
299	R. Martin, Lond. Lancet, 1848, i. 120.	31	4th labor	9th month	Complete	Dilated.	Head	Pulseless; fearful exhaustion; had had no pains; appeared too feeble to allow of version.	Detached, and recovered with little hemorrhage.	Spontaneous expulsion.	Repeated for several days; almost continuous for 9 days; perfectly blanched.	In 18 hours, pains came on, and the child expelled; fearful exhaustion followed.	Hemorrhage immediately ceased.	Not stated; recovery not expected	Dead	
300	T. Stokes, Lond. Lancet, 1848, i. 366.		1st labor		Complete	Dilated but little.		Deathly cold; pale and pulseless.	Separated; then stimulus and nourishment, and ruptured the membranes.	Pains increased; became exhausting; turned and delivered.	Been bleeding for 5 hours.		After separation, found a little bleeding still going on; "continued slight after delivery."	On 4th day doing well	Presumed dead	
301	Mr. Kinder Wood, Prov. Med. Journal, 1845, p. 133.					Moderately dilated.	Presumed head	Extremely exhausted; very cold, &c.	Completely detached, as the hand was introduced for turning.	Version.	Hemorrhage during several days; excessively profuse in frequent gushes.	Immediate.	No hemorrhage.	Recovered slowly	Presumed dead	
302	Ibid.						Presumed head	Extremely exhausted, so as not to bear ordinary delivery.	Separated the placenta.	Turned and delivered.	Long and copious.	At once.	Extremely slight during separation; ceased on complete detachment.	Died in 1 hour	Presumed dead	
303	Ibid.				Complete		Presumed head	Very much exhausted, so as not to bear ordinary delivery.	Separated.	Membranes ruptured; turning and delivery.		At once.	Ceased the moment of detachment.	Died in a short time	Presumed dead	
304	Ibid.	35				Partially dilated, and dilatable.		Cold, and almost pulseless; extreme exhaustion.	Detached.	Membranes ruptured; version.	Violent flooding still continuing.		No further hemorrhage.	Died in a few hours	Not stated	
305	Ibid.			End of 8th month	Partially detached	Size of a half-crown.	Head	Pulse could not be counted; very cold, &c.	Detached by sweeping the finger as the hand passed in.	Rupture of the membranes; pains came on; expelled placenta and child.	Frequent and copious during 2 months; very profuse before delivery.	6 hours.	None after detachment.	Recovered slowly	Dead	Separation done easily and quickly, with a very trifling loss of blood

TABLE III.—*Artificial Separation and Extraction of Placenta*—Continued.

NO.	BY WHOM AND WHERE REPORTED.	AGE.	NO. OF PREGNANCY AND GENERAL HEALTH.	PERIOD OF PREGNANCY.	PARTIAL OR COMPLETE.	STATE OF OS UTERI.	PRESENTATION.	GENERAL CONDITION.	MANAGEMENT OF PLACENTA.	MODE OF DELIVERY.	DURATION AND DEGREE OF HEMORRHAGE PREVIOUS TO SEPARATION.	TIME BETWEEN ITS SEPARATION OR EXPULSION OR EXTRACTION AND BIRTH OF CHILD.	HEMORRHAGE AFTER SEPARATION OR EXTRACTION.	FATE OF MOTHER.	FATE OF CHILD.	REMARKS.
306	W. C. Wilkinson, Prov. Med. Journ., 1845, p. 471.			Between 6th and 7th month	Complete	Less than a 5 shilling piece.	Head	Pains very feeble; greatly exhausted; almost pulseless.	Passed 3 fingers, then the hand, and detached it, and after a while withdrew it.	Hand again introduced, and turning; waited, on account of exhaustion, for 1½ hours, and delivered.	Great hemorrhage 3 weeks before, which had continued and is excessive.	1½ hours.	Ceased almost at once, on separation.	Recovered slowly		
307	H. E. Walker, in Prov. Med. and Surg. Journal, 1845, p. 557.	30	6th labor			Dilated.	Shoulder	Alarming state of exhaustion; pains feeble and unfrequent.	Separated by the hand, with which it was expelled.	After a while, turned easily.	Had been in labor 4 hours; hemorrhage very profuse and unabated.	Some time.	Entirely ceased.	Recovered soon	Dead	
308	T. M. Greenhow, Prov. Med. and Surg. Journal, 1845, p. 567.	44	Has had 13 children, all but 1 at 7th mo.; 3 only living; all but 1 preternatural; many placental presentations	In 1844, 7th month			Breech	Much exhausted.	Detached by the finger, and withdrawn.	Hips descended after placenta, and soon born.	Excessive hemorrhage.		No hemorrhage after detachment, and withdrawn.	Recovered	Not stated	
309	Ibid.			In 1845, 7th month			Head and hand	Much hemorrhage.	Detached by finger.	Delivered in about an hour.	Frequent during 6th month 1 or 2 profuse.	Less than an hour.	All hazard of further discharge effectually prevented.	Recovered	Dead	Ovum expelled entire.
310	J. Hutchinson, Prov. Med. and Surg. Journal, 1845, p. 626.	38	9th labor	8th month	Complete	Dilatable.	Head	At first, os undilated; vagina plugged; after 11 hours, very faint, with slight pains and slight hemorrhage.	Detached by hand, and forced by pains into vagina; membranes ruptured, and placenta expelled.	One hour after expulsion of placenta, being no pains, turned and delivered.	About 12 hours, hemorrhage severe; 5 or 6 lbs. of blood must have been lost.	1 hour.	No hemorrhage after detachment and expulsion; profuse during the operation.	Recovering	Dead	
311	R. G. Jay, Lond. Med. Gaz., Aug. 1846, p. 344.	30	Large and muscular; 6th pregnancy	8th month	Part in vagina, and partly attached	Dilated.	Funis and arm	No pains, but uterus contracted so as to prevent turning.	Detached and removed it.	Delivered with difficulty by turning.	Repeated for 8 days; was plugged, and took ergot; profuse flooding came on.	Delivery undertaken at once.	It "ceased."	Recovered	Dead	
312	G. F. Sticking, in London Med. Gaz., Jan. 1846, p. 76.	40	12th pregnancy		Complete	Considerably dilated.	Head	Bedding completely saturated; pains active.	Separated carefully, and removed.	Natural expulsion.	During 3 hours, it had much increased, and was increasing.	Apparently a short time.	Ceased immediately, on removal of placenta.	"Doing extremely well"	Living	Had formerly seen the value of removal of placenta.
313	Ibid., 1845, part ii. p. 94.		6th pregnancy	Apparently full	Complete		Apparently head	Insensible and completely blanched; almost pulseless; limbs cold; condition most alarming; stimulants given with difficulty.	Part found detached and external to the os; removed the remaining one-third without difficulty.	Pains came on; ruptured the membranes; spontaneous expulsion.	Flooding came on with the pains, and increased with them; hemorrhage had been excessive but had ceased.	Delivered 20 minutes after rupture of the membranes.	Apparently none; no mention of its recurrence.	Recovered	Dead	
314	W. A. Skinner, Dublin Hospit. Reports, 1849, vi. 347.	39	9 children and 1 miscarriage previous	Full	Complete	Partially dilated, but dilatable.	Head	Pains came on at 1 o'clock; plugging; at 5, pale and faint; lips blanched; tongue dry; pulse extremely feeble; faint, and thirsty; pains every 15 or 30 minutes.	Separated by fore and middle fingers; then 4 fingers; requiring introduction of the hand; complained of the pain.	Waited an hour; pains even less powerful; ruptured the membranes; stimulants; delivered under electro-galvanism and stimulus.	Hemorrhage a month before, and 3 or 4 times afterwards; bleeding during the 4 days previous to labor.	6 hours.	Active hemorrhage ceased; placenta not removed till about 5 hours, when part not confined by head at the brim was taken away.	Recovered	Dead	
315	Dr. Alex. Tyler, Dublin Medical Journal, 1847, p. 360.	40	2d pregnancy	4th month	Complete	Size of crown piece.		Ghastly pale, and anxious; pains continued.	Placenta was extracted.	Attempt to hook fœtus failed.	Labor and hemorrhage came on several hours before; profuse, and increasing with every pain.		Slight draining after extraction, until a portion came away.	Died of tetanus on 16th day	Not delivered	
316	Bell's Bulletin (from Provincial Journal), 1846, by G. Gurney Wales.	25	4th pregnancy	7th month	Apparently complete	Os size of a crown piece thick and not dilatable.		Slight pains on 2d visit.	"Spreading my fingers between the uterus and placenta, I detached with a sweep."	A strong pain expelled the placenta and my hand; in an hr., moderate pains expelled the child.	At 10 A. M., copious flow without pains; 29 hours after, a profuse flooding; during an examination, a frightful gush produced syncope.	1 hour.	Hemorrhage, from this moment of expulsion ceased.	Recovered	Dead	
317	Dr. Waller, of St. Thomas Hosp., in Braithwaite, xvii. 287, from Medical Times, Jan. 1848, p. 233; Case 24.				Complete but partially dilated	Considerably dilated; funis descended, and pulsating; cervix rather firm.	Head	No symptoms of pressing danger, bleeding going on, but not excessive.	Detached the placenta entirely, prior to turning.	Hand carried in, and child extracted.	There had been bleeding for some hours; bleeding going on, but not excessive.	Immediate.	No hemorrhage followed the separation.	Recovered as usual	Asphyxiated, but restored	

TABLE III.—*Artificial Separation and Extraction of Placenta*—Continued.

NO.	BY WHOM AND WHERE REPORTED.	AGE.	NO. OF PREGNANCY AND GENERAL HEALTH.	PERIOD OF PREGNANCY.	PARTIAL OR COMPLETE.	STATE OF OS UTERI.	PRESENTATION.	GENERAL CONDITION.	MANAGEMENT OF PLACENTA.	MODE OF DELIVERY.	DURATION AND DEGREE OF HEMORRHAGE PREVIOUS TO SEPARATION.	TIME BETWEEN ITS SEPARATION OR EXPULSION OR EXTRACTION AND BIRTH OF CHILD.	HEMORRHAGE AFTER SEPARATION OR EXTRACTION.	FATE OF MOTHER.	FATE OF CHILD.	REMARKS.
318	Dr. Waller, of St. Thomas Hospt., in Braithwaite, xvii. 287, from Medical Times, Jan. 1848, p. 233; Case 27.				Partial	Rigid, very; partially open.	Arm		As there was no possibility of turning, I detached the placenta, and dilatation waited for.	Turned.	There was considerable hemorrhage.	Less than 12 hours.	No hemorrhage occurred.	Died of muco-enteritis during the week	Died	Disease probably induced by loss of blood.
319	Ibid., Case 28.		Multipara	Beginning of 9th month	Complete	Os rigid and beginning to dilate; turning impracticable.	Feet	Bleeding was arrested, and she was recovering from syncope.	Separated placenta through its whole extent by the finger, without rupturing the membranes; placenta followed the child.	At 11 A. M., waters had escaped, and os was dilated; placenta felt hanging down; entirely separated; child born with little assistance.	Called suddenly from profuse hemorrhage; vagina full of clots.	"From evening" till 11 A. M.	From its separation in the evening to 4 A. M., no flooding; then pains continued, and a very slight discharge of blood.	Recovered as presumed	Dead	
320	T. Radford, in table, London Lancet, 1847, ii. 434.				Complete	Pretty largely dilated.	Head	Considerable constitutional depression.	Separated by hand.	Natural powers.	Profuse.	An hour and a half.	Completely arrested.	Saved	Lost	
321	Sarah Stone, in Complete Treat. on Midwifery, from Radford's table.				Complete	Pretty largely dilated.		Low and weak.	Separated and extracted.	Turning presumed.	Very violent.	Immediately delivered.		Saved	Saved	
322	Mr. Jesse, Prov. Med. Journal, ix. (Radford).				Complete		Feet	Pallid; exhausted; very bad.	Separated by hand.	Natural delivery.	Very profuse.	3 hours.	At intervals.	Died 26 hours after	Not stated	
323	Mr. Wilkinson, Lancet, 1845 (Radford).				Complete	Near size of a crown.	Head	Greatly exhausted.	Hand separated and extracted.	Turning.	Excessive.	1½ hours.	Almost ceased.	Saved	Not stated	
324	Mr. Maclean, in North. Journ., 1845 (Radford).				Complete	Size of half-crown.	Presumed head	Faint and collapsed.	Hand separated and extracted.	Natural powers, aided by ergot.		1½ hours after ergot.	Ceased.	Saved	Lost	
325	Mr. Radford (table).				Complete	Size of crown piece; dilated.	Head	Bad.	Separated by hand.	Perforator and crotchet.	Very considerable.	Immediately.	Ceased.	Saved	Lost	
326	Mr. F. Wells, in London Lancet, 1845, p. 504 (Radford).				Complete	Size of half-crown, rigid.	Leg and arm	Bad.	Separated by hand.	Leg drawn down.	Great.	Presumed about 13 hrs.	None.	Saved	Lost some days	
327	J. H. Houghton, London Lancet, Jan. 24, 1846.				Partial	Size of half-crown, and firm.	Head		Hand detached as it passed up.	Turning.	Violent.	Immediately.	Ceased.	Saved	Not stated	
328	J. M. Bryan, in Prov. Med. and Surg. Journal (Radford).				Partial			Bad.	Hand separated and extracted.	Turning.	Great.	Immediately.	Ceased.	Saved	Living; soon died	
329	L. H. Everitt, in Prov. Med. and Surg. Journ., x. 465.			3d month; miscarriage			Head and one hand	Syncope and exhaustion.	Hand separated and extracted.	Natural powers, with ergot.	Profuse.		Abated, but did not stop till cold water used.	Saved	Miscarriage	
330	Mr. Farr, Lond. Med. Gaz., 1847, ii. 302.	40	Very destitute; 10th pregnancy		Complete	A fibrous tumor in posterior lip of the cervix.	Head	Greatly emaciated.	Separated by hand; operation occupied an hour.	Vectis.	Slight hemorrhage previously; profuse when os began to dilate.	Apparently no interval.	Ceased after complete detachment.	Died in 6 hours, from prostration	Dead	
331	Mr. Radford, see table in London Lancet, 1847, vol. ii.				Complete		Shoulder	Very bad; exhausted.	Separated and extracted by hand.	Turning.	Very great and prostrating.	6 hours.	Ceased almost entirely.	Saved	Dead	
332	Dr. R. E. Bland, Missouri Med. and Surg. Jour., 1847.	30	5th or 6th pregnancy had good health	Full time or near	Complete	Soft and dilatable; size of a dollar.	Head	Great alarm; blanched; effective pains almost ceased.	Separated by the finger, and pressed back till ergot took effect; withdrawn after birth of child.	Ergot given; child expelled.	Sudden and very profuse, which continued.	Half an hour.	Entire cessation.	Saved	Living	Bleeding could be controlled by pressure of fingers.
333	Dr. Storer, Am. Journal Med. Sci., Oct. 1852, p. 345.			Presumed full	Complete	Unrelaxed.	Head	Great exhaustion.	Detached, and left alone.	No attempt to deliver, on account of exhaustion; 10 hrs. afterward, head had come down, and was delivered by forceps.	Sudden profuse; continued till a gallon lost.	10 hours.	Ceased.	Died on 8th day	Not stated	
334	Edward Ray, in Prov. Medical Journ., 1848, p. 124.	28	4th pregnancy	Full time	Complete	Open; uterus firm and globular.	Head	Unconscious; almost pulseless; no pains; blood oozing from vagina.	Gave stimulants, and proceeded at once to separate the placenta with his fingers, and withdrew it half an hour after he was summoned.	2½ hours after removal of placenta, pains came on; in 1½ hours more, perforation, and, in 1½ more, child expelled, ergot having been given.	No previous flooding; suddenly lost 5 pints, beside more.	5½ hours.	Continued *during* its removal, and ceased entirely on its removal.	Recovered well	Dead	

TABLE III.—*Artificial Separation and Extraction of Placenta*—Continued.

NO.	BY WHOM AND WHERE REPORTED.	AGE.	NO. OF PREGNANCY AND GENERAL HEALTH.	PERIOD OF PREGNANCY.	PARTIAL OR COMPLETE.	STATE OF OS UTERI.	PRESENTATION.	GENERAL CONDITION.	MANAGEMENT OF PLACENTA.	MODE OF DELIVERY.	DURATION AND DEGREE OF HEMORRHAGE PREVIOUS TO SEPARATION.	TIME BETWEEN ITS SEPARATION OR EXPULSION OR EXTRACTION AND BIRTH OF CHILD.	HEMORRHAGE AFTER SEPARATION OR EXTRACTION.	FATE OF MOTHER.	FATE OF CHILD.	REMARKS.
335	G. Bennett, in London Lancet, Sept. 1852, p. 216.	27	3d pregnancy		"Over the os; partly detached;" complete	Os a little open; soft and dilatable.	Head	Pale and cold; pulse scarcely perceptible; perfectly sensible; pains very feeble.	Detached it with the fingers, and rupturred the membranes.	Turned and delivered at once.	Had occasional floodings for a week; not alarming till to-day; pains came on, and profuse bleeding.	Delivered feet and legs at once; body soon expelled.		Recovered	Living	Child small.
336	Portal, from Dr. Lee, in Lancet, 1847, ii. 548; Case 69.			8th month	Complete	Slightly open; size of a crown piece.	Probably head	Neither power or consciousness.	Separated and withdrew the placenta.	Turned and delivered at once.	Hemorrhage going for 10 or 12 days.	Immediate.		Recovered	Living	Inflammation of uterus and eye followed.
337	Ibid., Case 43.			6th month	Complete	Size of a crown piece.	Head	Immediate delivery alone could save her.	Os somewhat dilated; detached the placenta and withdrew it.	Then seized a foot and drew down leg, completing delivery at once.	"Had a great flooding."	Immediate.		Recovered	Not stated	
338	Communicated by Prof. R. D. Mussey, Cincinnati.							Loss of blood so great that she was unconscious; pulse and breathing nearly extinct.	Without delay, the hand was introduced, the placenta entirely separated, and	Child turned and delivered; 3 or 4 minutes only occupied.		Immediate.		Recovered	Living	
339	Dr. Waller, in Braithwaite's Ret., from Med. Times, 1848, p. 233; Case 5.						Arm		Was told the placenta had originally presented, and been entirely removed.	Impaction; impossible to turn; embryotomy difficult; no satisfactory rally.			No hemorrhage followed its extraction.	Died at end of a week of low fever	Dead	
340	Dr. Cox, Amer. Med. Monthly, Oct. 1854, p. 281.				Complete	Dilatable after plugging.		Considerable depression of strength.	Separated the placenta.	Then turned, "from fear of internal hemorrhage."	Repeated hemorrhages during 2 months.	Immediate.		Died on 9th day from irritative fever	Dead and exsanguined	
341	Prof. Simpson, London Med. Gazette, xxxvi. 1011.			7th to 8th month	Apparently complete	From its small size and great height, with difficulty reached.		Membranes ruptured, and ergot given; discharge continued; was blanched and prostrated.	It seeming very difficult and dangerous to turn, the placenta was detached and gradually extracted.	Spontaneous expulsion.		2 hours.	"All hemorrhage ceased."	Recovery perfect and speedy	Presumed dead	
342	M. Baudelocque, L'Art des Accouchement, p. 33.						Arm and head		Separated and extracted by an ignorant midwife.	Turning.	"Presumed great."		Entirely ceased.			
343	W. Perfect, Case 109.							Good.	Separated, and laid hold of roughly and pulled forward.	Turning.	Not great, but frequent.	5 hours.	Continued slight.	Saved	Saved	
344	Mr. Wilson, in Prov. Med. and Surg. Journal, 1844.							Exhausted.	Ignorantly separated and extracted.	Turning.	Very violent.	"Considerable."	Not increased to any dangerous extent.	Saved	Lost	
345	Thos. Radford, M. D., Midwife.						Head	Very low.	Ignorantly separated and extracted; long forceps used.		Great.	3 hours.	Very trifling.	Lost	Lost	
346	Ibid.					Fully dilated.	Arm	Very faint and feeble.	Ignorantly separated and extracted.	Turning.	Great.	2 hours.	None.	Saved	Lost	
347	Ibid.					Partly dilated.	Head	Good.	Ignorantly separated and extracted.	Natural powers.	Great.	4 hours.	Ceased.	Saved	Lost	
348	Ibid.					Nearly dilated.	Head	Very low.	Ignorantly separated; forceps used.		Great.	2 or 3 hours.	Ceased.	Lost	Lost	
349	Ibid.						Head	Bad condition.	Ignorantly separated and extracted.	Natural powers.	Great.	1 hour.	Nearly ceased.	Saved	Lost	
350	Dr. Lowenhart, No. 113, Simpson's tables.						Arm		Ignorantly separated and extracted by a midwife.	Turning.				Saved	Lost	
351	Mr. Crawford, No. 58, Simpson's tables.						Head		Accidentally separated, on introduction of hand for turning.	Turning.	Exhausting.	Less than 10 minutes.	None.	Saved	Saved	
352	Dr. McDonald, No. 59, Simpson's tables.						Head		Accidentally separated, on introduction of hand for turning.	Turning.	Excessive.	A few minutes.	Good deal.	Saved	Lost	
353	Mr. Campbell, No. 73, Simpson's tables.						Head		Accidentally separated, on introduction of hand for turning.	Turning.	Excessive.	Immediate.		Saved	Saved	

Table III.

Mortality after Artificial Detachment of the Placenta.

This table embraces all the cases published in which the placenta was separated by the hand. Mr. Radford, in a table previously alluded to, includes several cases from Portal and Smellie, which do not appear to us to belong to this head. In the most of these, as it seems to us, there is no evidence that the *separation* spoken of was more than partial, in order to admit the hand in turning; and, in Case 71 of Portal, it is distinctly stated that he carried the hand by the placenta, according to the abstract of Portal's cases by Dr. Lee, in *London Lancet*, 1847, vol. ii. We have included also a few cases in which the separation was effected by ignorant persons, and a small number in which it took place accidentally in delivery by turning. We have included these because that, inasmuch as the separation occurred from causes other than the spontaneous efforts of the uterus, the results following such separation will not differ from those in which the separation was accomplished by the intelligent practitioner. At any rate, the difference, if any, would be against the proposed operation, not in its favor.

Excluding Cases 297, doing well on the third day; 300, doing well on the fourth day; 312, "doing extremely well;" 299, recovery not expected; 342, not stated; 329, a miscarriage at the third month—we have *forty-seven recoveries* and *thirteen deaths*, or *one in four and six-tenths* (1 in 4.6), as the gross mortality after *artificial separation*; while that after *spontaneous separation* is a trifle less than *one* in *fourteen* (1 in 14); a result in accordance with our anticipations.

The mortality after ordinary modes of treatment was set down by Dr. Simpson, in his *complete* table in the *London Lancet*, 1847, vol. ii., as 180 in 654, or one in every 3.6. This table embraced only the experience of such individuals, or institutions, as furnished at least ten cases of the accident.

To these, in a note, Dr. Simpson adds certain others which had been published subsequently to his paper, and part of them, as he says, for the express purpose of showing a less mortality than usual. They were those of

Dr. Merriman	89 cases,	22 deaths.
Schwoerer	15 "	5 "
Mr. Russel	36 "	7 "
Dr. Campbell	22 "	1 death.
Mr. Newnham	13 "	1 "

To these may be added—

Dr. W. H. Crowfoot* . .	14 cases,	3 deaths.
Mr. Charles Clay† . . .	42 "	6 "
Dr. Ashwell‡	20 "	2 "
Dr. Waller§	33 "	10 "
	284	57
	654	180
Total	938	237 lost, or 1 in 3.95.

The mortality of those cases in our first table, in which the presentation of the placenta is noted, is precisely the same, viz: 66 deaths to 195 recoveries, or 1 in 3.9 of the whole.

In the London *Lancet*, 1847, vol. ii. p. 381, Dr. Simpson states, that among the cases comprising his table of 654 cases, 421 patients were delivered by turning, of which 144 died, or 1 in 2.9.

The gross mortality after artificial separation is, therefore, somewhat less than the general mortality under ordinary modes of treatment, and especially less than after turning; but it is very much greater than after *spontaneous expulsion of the placenta.*

Let us inquire into the character of the cases in which this expedient has been resorted to, and compare them with the other classes of cases, since it may appear that these were cases of more than usual severity.

1. *Presentation of Placenta.*

30 cases were complete.
5 " apparently complete.
3 " nearly "
4 " partial. Total 35 complete, 7 partial, or 16.6 per cent. only *partial;* whereas, in our first class, among recoveries, ~~37~~ 33 per cent. were partial; and, among deaths, ~~23~~ 21 per cent. partial. Here is a considerably larger proportion of complete presentations among those in which artificial separation was resorted to.

* Prov. Med. and Surg. Journ., 1845, p. 674.

† From Med. Times, in Lond. and Ed. Journ., 1842, p. 732.

‡ Lond. Med. Gaz., part ii. 1845, p. 1196, Dr. A. says he has had at least 20 cases of complete presentation, and but two deaths.

§ Braithwaite, vol. xvii. p. 289.

2. *Hemorrhage before Separation.*

This was in 62 cases, "severe," "very urgent," "profuse," &c.
" 3 " "considerable."
" 1 " "moderate," or 1 moderate in 66 cases.

In our first class, we had a total of 147 in which the hemorrhage was "severe" and "considerable," and 15 "moderate," or 1 in 11 of the whole, moderate.

3. *Condition of the Patient prior to Separation of the Placenta.*

There was extreme and alarming prostration in 31* cases.
"Prostration," or "exhaustion," apparently not so profound as the others, in . . . 10† "
"Copious," severe hemorrhage in . . . 13‡ "
No urgency in . . . . . 5§ "

Among *recoveries* in our *first class*, we find that, previous to delivery, the general condition of the patient was as‖ follows:—

Alarming prostration in . . . . . 38 cases.
"Prostration," or "exhaustion," "producing syncope," &c. in . . . . . 40 "
Hemorrhage more or less severe in . . 24 "
No urgency, or apparently none, in . . 35 "

Among *deaths* in the same class there was—

Alarming prostration in . . . . . 37 cases.
"Prostration," &c., in . . . . . 6 "
Great hemorrhage in . . . . . 17 "
No urgency in . . . . . 5 "

From this comparison, it is very plain that the 66 cases in which the placenta was artificially detached, embrace a considerably larger proportion of severe cases than are ordinarily met with—indeed, the mild and severe cases among these correspond remarkably, not only in proportion, but in numbers, also, with those among the deaths as just given above; that is, they were, as a whole, previous

* Among these there were 23 recoveries and 8 deaths.

† Cases 289, 321, 331, 332, 335, 341, 344, 346 recovered; Case 340 died.

‡ Cases 294, 309, 310, 311, 316, 319, 320, 327, 329 recovered 312, (see) Case 315, (see) 318, 330 died.

§ Cases 290, 291, 317, 344, 347—all recovered.

‖ There is some difficulty in making such a classification, but the above cannot differ much from the truth.

to the separation of the placenta, suffering apparently from about an equal degree of exhaustion with those patients who, subjected to ordinary treatment, died.

4. *Mode of Delivery.*

Natural delivery in 22, of which { 8 had ergot. / in 1, ether increased the pains. / in 1, electro-galvanism do.

Craniotomy	in	3,
Forceps	"	1,
"Extracted"	"	2,
Turning	"	33,
Vectis	"	1,
Undelivered	"	1,

Mode not stated, " 3, or *twenty-two* by the natural powers, and *forty* by artificial aid; or about *one in three* of the whole delivered by spontaneous expulsion of the child.

Here is a much larger proportion of deliveries by the *natural powers*, than was found among the cases composing Table I.; the proportion of such among those being nearly *one in six;* although, as we have just shown, the cases in Table III. were, as a whole, of a decidedly more grave character than those in Table I.

We have attributed the great proportion of *deliveries by the natural efforts*, after *spontaneous expulsion* of the *placenta*, to the existence of a more than ordinary vigor of uterine action in such cases throughout. It may now be asked, if the increased proportion of *spontaneous deliveries*, after *artificial* detachment of the placenta may not be due to the same cause; and if the inferences thus far deduced, that these were, as a class, cases of unusual severity, may not be incorrect. This is answered by a reference to the *time that elapsed* between the separation of the placenta and the birth of the child in the two classes.

Of the *spontaneous deliveries* of the child, among Dr. Simpson's cases and our own, after *spontaneous separation* of the placenta, the child followed

The placenta in	3	cases in	"several hours."
" "	2	"	"considerable time."
" "	1	case in	10 hours.
" "	1	"	8 "
" "	5	cases in	4 to 5 hours.

The placenta in 1 case in 3 hours.
" " 1 " 2 "
" " 7 cases in 1½ "
" " 4 " 1 hour.
" " 3 " ½ "
" " 1 case soon.
" " 37 cases in 10 minutes, or less.

Or, in 29 cases, over ten minutes; and in 37 cases, in ten minutes or less.

In *spontaneous deliveries* after *artificial separation*, the child followed
The placenta in 1 case in 18 hours.
" " 2 cases in 6 "
" " 1 case in 5½ "
" " 1 " 4 "
" " 1 " 3 "
" " 1 " 2 "
" " 2 cases in 1½ "
" " 1 case over 1¼ "
" " 2 cases in 1 hour.
" " 3 " ½ "
" " 1 case in several hours.
" " 2 cases in a short time.
" " 1 case immediately.

Or, in 16 cases, it followed in a half hour or more, in two in a "short time," and in *one* only *immediate*.

The true inference from these facts we conceive to be, that in a majority of cases of spontaneous expulsion of the placenta, the contractions of the womb, on account of the preponderance of partial presentations among such, and the less severe character of the hemorrhage, were sufficiently strong to expel the child at once, or within ten minutes; but that in the cases of artificial separation, *the hemorrhage having ceased in consequence of the detachment, the vital powers have rallied, and at various intervals, from one-half hour up to eighteen hours, have expelled the child.*

In further support of this inference is the fact, that of cases of artificial detachment in which delivery of the child took place by the natural efforts, a fair proportion were in extreme danger, before the detachment was undertaken.

Thus, in 13 there was extreme prostration.
" 4 " prostration less decided.
" 4 " severe hemorrhage.
" 1 " no urgency.

5. *Hemorrhage after Detachment of the Placenta.*

In 35 cases it ceased *immediately* and *entirely.*
" 1 case, no further hemorrhage spoken of.
" 1 " none for several hours, then slight.
" 2 cases it "ceased almost instantly."
" 4 " " " entirely.
" 1 case there was not over a teacupful lost afterward.
" 1 " not over two ounces.
" 1 " " four "
" 3 cases it continued slight, and in 1 after delivery.
" 1 case it continued slight, until part of the placenta came away.
" 1 " it continued at intervals.
" 1 " it was "not increased."
" 1 " "no further danger."
" 1 " miscarriage, it abated, but ceased only after cold water.
" 1 " it continued a "good deal."
" 7 cases immediate delivery followed.
" 4 " not stated.

Total, 66 cases.

It appears from the above that, in a large proportion of cases, hemorrhage either ceases at once and entirely, after detachment of the placenta, or it ceases within a short time; and that if it continues at all, it is but to a trifling degree. In Case 252 alone, did it continue to a severe degree; the patient recovered. In Case 322 it continued at intervals, and the patient died.

6. *Conditions for which Detachment of the Placenta was resorted to.*

In 31 cases there was *extreme exhaustion* previous to the operation. Of these, 23 recovered and 8 died, or nearly 1 in 4 of the whole. Of the eight fatal cases—

Case 295 died in a half hour.
" 303 " in a short time.
" 304 " in a few hours.
" 322 " in 26 hours.
" 383 " on 8th day.
" 339 " in one week, from fever.

In Cases 345, 348, the period of death is not stated.

In 11 cases there was *rigidity of the os uteri*. In 9, the patient recovered, viz: Cases 289, 290, 292, 316, 317, 319, 326, 327, 341. Two patients died, viz: Case 318, in one week, of muco-enteritis, and Case 333, on the eighth day; *one in five and a half* died.

Among these, besides rigidity of the os, there were—

In 4, extreme exhaustion, with 1 death.
" 3, severe hemorrhage, " 1 "
" 2, "prostration," or "exhaustion."
" 2, no urgency.

It will be remembered that in our first class of cases, the mortality, when complicated with rigidity of the os uteri, was *one* in *two and four-tenths* after turning had been performed; and as high as one in three, after including twelve cases delivered by perforating the head, of which one only died.

7. *Disposition of the Placenta.*

In 36 cases the placenta was simply detached; in 30 it was withdrawn at once. Of the 35 cases in which hemorrhage ceased at once and entirely, it was separated only in 20 cases, and separated and withdrawn in 15 cases. Hence it would appear that the mere *separation* of the placenta is sufficient to arrest the hemorrhage, and that its withdrawal is generally unnecessary; thus obviating an objection that has been urged against the operation, that the withdrawal of the placenta through an undilated os must be difficult and hazardous.

8. *Time between Separation of the Placenta and Delivery of the Child.*

Among the children *saved*, delivery took place

In 6 immediately.
" 3 apparently immediately.
" 1 immediately in part.
" 1 after dilating the os and turning.
" 1 in less than ten minutes.
" 1 in half an hour.
" 1 in five hours.
" 1 not stated.

Among children *lost*, delivery was

In 5 immediate.	In 1 in four hours.
" 1 over twenty minutes.	" 1 in five and a half hours.
" 2 in less than an hour.	" 3 in six hours.
" 3 in one hour.	" 1 in nine hours.
" 3 in an hour and a half.	" 1 in less than twelve hours.
" 1 in less than an hour.	" 1 in eighteen hours.
" 1 in two hours.	" 1 in a short time.
" 3 in three hours.	" 3 in a considerable time.

In the cases in which the time was not stated, *six* were immediate, the remainder over an hour and a half.

9. *Mortality of Children after Artificial Detachment.*

	15 children were saved.
	32 " " lost.
In	16 result not stated.
	2 not viable.
	1 undelivered.
Total,	66

The mortality among the children, 15 saved and 32 lost, or a *trifle less than one in three* saved.

There were saved, after ordinary modes of delivery, *one in two and seven-tenths* of the whole.

After spontaneous separation, according to Dr. Simpson (his table consisting chiefly of such), within a *trifle of one in three* were saved.

The similarity of results, to the child, in these three classes, is very striking. It exposes clearly the very prevalent error, that in cases of placenta prævia, the child's life is almost necessarily sacrificed. This idea is more or less distinctly advanced by almost every writer on the subject. In Dr. Lever's thirty-four cases, the lives of a *majority* of the children were saved; while among Dr. Merriman's only one in four were saved. This difference is doubtless due to the fact, that the former were patients of the Guy's Hospital Lying in Charity, and enjoyed the advantage of able medical assistance throughout, whereas a large proportion of Dr. Merriman's cases were seen in consultation, and many at an advanced stage of the labor.

While the probabilities of saving the child's life under ordinary modes of delivery have been under-estimated, the risk to the child

from separation of the placenta has been exaggerated. Dr. Ashwell, for example, says it is an operation attended not "unfrequently with certain injury to the mother, and invariably with the loss of the life of the child."

But while we find that, in the cases in which it has been thus far tried, a proportion of children has been saved, equal to that after other modes of delivery, we must not fail to note that the children born alive were delivered within a short time after the separation took place. In Case 343, delivery occurred five hours after the alleged separation of the placenta. This is a case from Perfect, and it may well be doubted if, in this instance, the separation was completed, unless, indeed, it was one of those exceptional cases in which the children are said to have remained asphyxiated for an almost fabulous period, and then restored. In Case 332, the interval seems to have been very considerable, and from its great interest, we quote its leading particulars, incorporating several facts obligingly furnished us by Dr. Bland.

Case 332. Was called at 10½ P.M. to Mrs. B., æt. 30 years; fifth or sixth labor; previous good health. The first intimation of approaching labor was, that feeling a desire to urinate, she availed herself of a closed vessel, and on arising from it, to her no little alarm and astonishment, it was observed half filled with blood. The hemorrhage continued after she resumed the recumbent position, in such excess as to saturate and pass through the bed, running in a stream upon the floor. "I was immediately sent for, and found her as follows: Great alarm, countenance blanched, pulse weak and frequent, excessive restlessness and constant discharge of blood. The os tincæ was soft and dilatable, and open to the size of a dollar. In attempting to introduce my finger to ascertain the presentation, it was obstructed by the placenta on every side, the right excepted; here, with some difficulty, the finger was introduced." Dr. B. considered that it had originally adhered on all sides. On a more careful examination for some inches above the orifice, especially on the left side, the placenta was discovered to be unequally separated from the inner surface of the uterus, and the hemorrhage proceeded from these unequal separations. "This was clear to my mind from the fact that whenever I placed my fingers upon the placenta and gradually and firmly pressed upon the parietes of the uterus [with the back of the fingers?] from which it was separated, I completely arrested the discharge. For some half hour the hemorrhage was completely controlled by these means.

"Effective labor-pains having now almost entirely ceased, and discovering, whenever the hand was withdrawn, the hemorrhage returned with increased violence, I determined to turn and deliver by the feet." Before acting upon this determination, in accordance with the suggestion of Dr. Simpson, he introduced the finger, carefully separated the placenta, breaking up the irregular adhesions, and by this means permitting the uterus to contract equally and regularly upon its contents; "the result of which, to my gratification and astonishment, was the entire cessation of hemorrhage, and consequent danger. I now pushed the part of the placenta that obstructed the progress of the head, to the left side, and held it there with my finger, to prevent its descent before the head. I paused a few moments to consider the course to be pursued. In the short time allowed for thought, I determined to prevent, if possible, the descent of the placenta before the head of the child, and to sustain it until effective pains could be excited. To accomplish this, I gave grs. xxx of ergot; in fifteen or twenty minutes I discovered considerable uterine action, which increased steadily, resulting, in about a half hour, in the birth of the child, alive and vigorous, at about 2 o'clock A. M.; there was no bleeding afterward; the placenta was easily withdrawn, and mother and child are doing well." Dr. B. says "the hemorrhage came from the bleeding mouths of the uterine vessels, and not form the placenta. Unequal separation of uterus and placenta prevented regular uterine contractions; hence the large vessels of the exposed uterine surface poured out their blood; and relief was effected by a total separation and a consequent regular and general contraction of the organ closing up the bleeding mouths."

Dr. Bland* states that his motive in preventing the descent of the placenta, before the child, was that the supply of arterial blood to the child might not be entirely cut off. Though all direct connection was of course destroyed by the separation of the placenta, the child appears to have survived, in this instance, an unusual length of time, and was born vigorous, not asphyxiated, as might have been anticipated. In connection with this, we note the following from the *Lond. Lancet*, Sept., 1852: George Bennet, M. R. C. S. Sydney, says he has had four cases, and in each detached the placenta, and each recovered; three children were stillborn, one living. His friend, Wm. Bland, tells him that for 25 years he has, as soon

* Dr. R. E. Bland, Miss. Med. and Surg. Journ.

as the dilatability of the os would permit, separated the placenta and extracted it, and placed it in a hand basin of warm water at 98°, and he says "the results have far exceeded his most sanguine expectations."

We have shown that among the cases in which this operation has been thus far performed, there was a larger proportion of severe cases than could be found among an equal number of cases in our first class, and which were subjected to ordinary modes of treatment; and, notwithstanding this, the loss of life among them was less than after the ordinary modes of treatment. But even if this diminished mortality did not so distinctly appear, we have the important fact demonstrated beyond reasonable doubt, that entire separation of the placenta is followed, in almost every instance, by cessation of hemorrhage, and that in a majority of cases the cessation is instantaneous and complete. Furthermore, it does not appear that the operation is attended by any peculiar difficulty, or that it exposes the patient to any especial danger. This knowledge affords the assurance that we have a precious resource, where delivery by other means is unadvisable or impracticable.

Why then, it may be asked, should it not always be resorted to when the placenta presents? Were the mother's safety alone consulted, there can be little doubt that an early suppression of the loss of blood would convert the most of such into cases of simple labor; but we have shown that when the placenta has been detached, almost immediate delivery is necessary to secure safety to the child. Hence, in cases permitting immediate delivery, there can rarely be a necessity for detaching it entirely, when a partial separation will allow the introduction of the hand for turning.

In those instances of rigidity of the os uteri, in which the flooding is dangerous and uncontrollable, as, according to experience, it frequently is, this must prove a most valuable expedient, as is shown by a mortality of 1 in 5.5, compared with that of 1 in 2.4 after turning. Again, in cases of extreme prostration, in which immediate delivery by turning would be hazardous, and yet the hemorrhage continues, the detachment of the placenta may be resorted to with almost a certainty of its putting an end to the loss of blood, and thus affording an opportunity for the natural powers to rally, perhaps to a spontaneous expulsion of the contents of the womb.

To these two classes of cases it was limited by Dr. Simpson and Mr. Radford, who have been chiefly instrumental in bringing this

subject to the notice of the profession; and to such it ought to be confined, if we have interpreted our cases aright.

It would be interesting to inquire into the influence of the particular circumstances which Dr. Simpson specifies, as indicating the propriety of this operation, viz: "first pregnancies," "premature labors;" but as in any case, the propriety of the operation is to be indicated by the circumstances attending it, such an inquiry would lead to no practical results; we seek only to learn the conditions that call for it.

GENERAL REVIEW OF THE SUBJECT.

From what has preceded, we deduce the following as the course which the experience of the profession has shown to be the most likely to be attended with success in the management of this accident.

1. We have shown that, as a general rule, cases in which delivery takes place prematurely are attended with greater risk to the mother than those occurring at the full time, with the exception of those before the seventh month, which rarely prove fatal, in consequence of the undeveloped condition of the bloodvessels of the womb at that early period. The probabilities of the child being saved are probably better at full term, though this is not so distinctly shown by our statistics. Hence, if it be possible, cases in which premature delivery is threatened ought to be conducted to the full period.

This was the advice of Mr. Kinder Wood, a successful obstetrical teacher, who was in the habit of detaching the placenta in cases of dangerous hemorrhage from its presentation. When hemorrhage comes on before the completion of the term of pregnancy, absolute rest and cold, with, in some cases, opium, should be resorted to for the purpose of restraining hemorrhage, *avoiding* the use of the *tampon* until the progress of the case indicates that extreme measures must be resorted to; for the introduction of the tampon in the cases in which it is noted was, in certain instances, soon followed by labor pains more or less effective. But, when its use is determined upon, a suppression of the hemorrhage may be quite confidently relied upon for a time, at least, provided its introduction be skilfully effected. In many instances, however, at this early period, the hemorrhage continues, and artificial delivery is the only resource.

2. Most cases of *partial* placental presentation require only rup-

ture of the membranes. By this simple expedient, the uterus is brought into active contractions, and hemorrhage restrained within moderate limits, or entirely suppressed, until delivery takes place spontaneously, as occurs in a large proportion of cases, or is accomplished by art. But hemorrhage, in cases of partial presentation, is not always thus controlled, and our first table furnishes not a few which were attended by most alarming loss of blood.*

3. In cases of complete presentation, if hemorrhage does not yield to simple measures, and in dangerous cases of partial presentation, early delivery is of the first importance. To select the most favorable opportunity for this is often one of the most critical tests of the physician's skill. To do this before the os has become dilatable is to incur the risk of inflicting serious lesions upon the uterine neck, and a difficult and protracted withdrawal of the child; while, to wait unnecessarily long, is to expose the patient to great hazard from unnecessary loss of blood. The rule should be to wait not for a dilated, but a dilatable condition of the os. The great source of danger in the conduct of cases of placenta prævia is the delay required to permit the necessary dilatation of the mouth of the womb; while waiting for this necessary prerequisite to delivery, exhausting hemorrhage has often taken place, from the effects of which the patient has never recovered.

With the hope of keeping the bleeding in check during this necessary delay, the membranes may be advantageously ruptured; for we need not, in these cases, fear any embarrassment to delivery from this cause, inasmuch as the uterus is almost invariably relaxed after severe hemorrhage. The administration of ergot, under such circumstances, in the manner already described, with the view of keeping up a pressure upon the mouths of the bleeding vessels until the os should dilate, is sanctioned by the results of some of our cases in which it was employed; and although not often given, as we judge, with this particular view, it promises to be, in many cases, a valuable resource. In Dr. Fountain's two cases of complete presentation, rapid dilatation took place under its repeated administration; a compression of the placenta was kept up until the os permitted the introduction of the hand for turning, and both mothers and children were saved. In this way we imitate, to a certain extent, the course pursued by nature in spontaneous expulsion of the child.

* Of the eight cases lost among Dr. Lever's cases, [illegible] were complete and [illegible] partial presentations.

The inhalation of *ether*, in one instance, quickened labor, and chloroform, in another, seemed to favor relaxation of the uterus. How far these agents, especially the latter, may prove subservient to this important object, experience has not yet determined.

4. But whatever means may be resorted to for keeping in check the flow of blood while the os is undergoing dilatation, the physician should not leave his patient after that process has begun. Dangerous, and even fatal flooding sometimes takes place even when the os is yet undilated, as happened in a case recorded by Smellie. Dr. Rigby laid down the rule, that the patient should not be left by her physician after the placenta was discovered to be presenting. This rule he afterwards modified, as the interval in such cases is too long to justify the sacrifice of time. But the physician should remain beside his patient until active hemorrhage has ceased; and if dilatation is in progress, it is imprudent to leave the bedside until delivery has been effected. It has occurred in the experience of every physician to be surprised by the unexpectedly sudden dilatation of the os in some cases of ordinary labor. On reading several of our cases, it is very apparent that from a neglect of the precaution here urged, the physician failed to be at hand when sudden and fearful hemorrhage took place, followed by perilous and even fatal exhaustion. Such sudden losses of blood are not uncommonly accompanied by a degree of dilatation of the os uteri that would render immediate delivery admissible, as in Case 69, from Rigby.

It corresponds with the experience of those who have had the largest opportunities for observation, and is an inference certainly warranted by a general survey of our cases, that of patients who enjoy intelligent and active medical assistance from the commencement of hemorrhage until the termination of labor, a very large proportion are conducted through their perils in safety, and no inconsiderable proportion of the children are saved. An early delivery by turning has been sanctioned by long experience, as the best general mode of treatment for securing safety to mother and child.

5. But in some instances, hemorrhage will not yield to the means thus far recommended, and the os continues unprepared for artificial delivery. In these cases we may separate the placenta, with the confidence of almost certainly putting an end to the hemorrhage, and with an almost equal certainty of destroying the child; unless the os should permit artificial delivery within a short time after the

separation is effected. The urgency of the symptoms in such instances, is sometimes very great, and it must be left to the judgment of the practitioner, in each individual instance, to determine whether to separate the placenta or to wait still longer.

6. The os may be dilated or dilatable, and the patient in a state of extreme exhaustion. Here, turning could be performed with facility, but delivery would be hazardous. In these cases the placenta may be detached with much less disturbance to the mother than would occur in turning under such circumstances, and an opportunity afforded for the patient to rally before she should be delivered. Table III. affords several instances in which spontaneous delivery took place, after such separation, and the patient recovered. Yet even in these cases, we must bear in mind that children are by no means necessarily destroyed by excessive loss of blood by the mother; and a resort to the stethoscope would doubtless often prove of great assistance, where in doubt as to the propriety of detaching the placenta. When we have satisfactory evidence that the child is dead, there can be no objection to an early resort to the separation of the placenta.

We have not entered into the controversy respecting the source of hemorrhage in placenta prævia, because our statistics furnish but little, and that contradictory, evidence on the subject. In Case 332, Dr. Bland felt the hemorrhage proceeding from the uterus, and in another case it was felt to come from the placenta. Those interested in investigating this point, will find in Dr. Murphy's *Lectures* an interesting *résumé* of the arguments drawn from the structure of the placenta, and its connection with the uterus, by which its placental origin is advocated; and in the communications of Drs. Lee, Chowne, and Ashwell, in vol. ii. of the London *Lancet* for 1847, the considerations in favor of the belief that it proceeds from the mouths of the exposed uterine vessels. Our own opinion is that it proceeds from both these sources, but mainly from the womb. Borrowing the language of another, the unequal separation of the uterus and placenta prevents regular uterine contractions; hence, the large vessels of the exposed uterine surface pour out their blood, and relief is effected by a total separation, and a consequent regular and general contraction of the organ closing up their bleeding mouths.

In conclusion, it is proper to remark that, in the preparation of this paper, we have been influenced by no partialities in favor of any particular measures, but have sought to give a faithful and honest interpretation of the facts presented. Some errors of refer-

ence to particular cases may have crept in, but the numerical results are believed to be correct.

A portion of the *results* of the tables may be regarded by some as more curious than practical; but the object in presenting such has been to afford a test of the correctness of others which are of practical value, inasmuch as the greater the number of instances in which we can show a correspondence of particular statements with general experience, or with other statistics, the greater the confidence we may place in the results as a whole, or on points upon which there has hitherto been a difference of opinion. It has probably surprised the reader, as well as ourselves, that cases collected from such a variety of sources, many of them very imperfect in detail, some supplying a fact under one head and some under another, should show a harmony of result as a whole. It is in accordance with the constancy which we look for in the general history of diseases and accidents, as well as in the other operations of nature, which, however irregular and uncertain they may appear, are regulated by laws which, unseen in the case of individuals, become more or less apparent when we consider large numbers. Upon our confidence in this uniformity the whole fabric of vital statistics is based. In not a single instance have our cases yielded to our queries an answer contrary to experience, though doubtless not always affording the exact numerical proportions between groups or classes which probably exist.

We have sought, by a thorough analysis of all the important circumstances connected with this accident, under ordinary modes of delivery, to establish a standard by which the results of other methods of treatment may be compared. We have tested by it the results of spontaneous and of artificial separation of the placenta, and have exhibited the different conditions under which the separation is effected in these two classes. Imperfect as the knowledge thus obtained must confessedly be, the results of our inquiries are submitted to the profession, with the belief that they are a step towards obtaining a more intimate acquaintance with the natural history of the accident, and with the effects of treatment.